

THE LIBYA MODEL: THE EFFECTIVENESS OF SANCTIONS IN PROMOTING
NUCLEAR NONPROLIFERATION

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CHAPTER I

INTRODUCTION

On December 19th, 2003 Libya announced that it was abandoning its WMD program. Libya suddenly became a model for successful nonproliferation and it provided a clear example of a state reversing its decision to pursue nuclear weapons. By examining a successful model for nonproliferation, effective strategies to employ against non-nuclear-weapons states pursuing nuclear weapons may be discovered. However, in the Libya model there is a debate over which strategy was the most effective at influencing state behavior because both point to successes. On the one hand, there is the strategy which champions a rewards system to influence state behavior and will be referred to as the carrot approach towards dealing with rogue states or states of concern. The other strategy heralds a system of punishment to influence state behavior and will be referred to as the stick approach. Both strategies point to examples within the Libyan model as proof that their approach works best. Although both sides claim credit for the policy reversal, careful examination of several factors within the Libyan model reveals that certain policies were more effective than others. By selecting the most effective policies employed in the Libya model for nonproliferation, the framework for a successful international model for nonproliferation might emerge.

On the other hand, the Libya model might merely be case specific. It is possible that the policies towards Libya were only effective because of special circumstances

pertaining to Libya. The best approach towards future nuclear nonproliferation policies might be state specific in scope, and there is no broader international model that can be determined from the Libya model. However, even if there was no broader international model for nonproliferation, the Libya model still merits investigation to determine effective policies that could be applied on a state specific basis.

The purpose of this thesis is to examine the reasons behind Libya's decision to abandon its clandestine nuclear weapons program and to determine which policies employed to curtail that behavior were the most influential upon Libya's policy reversal. By examining the effectiveness of various approaches within a successful nonproliferation example such as the Libya model, future policy decisions regarding nonproliferation can be backed by a proven record of success. The important factor to consider is that the Libya model provides an opportunity for the nuclear nonproliferation regime to identify and correct flaws within its system. It provides an example of a peaceful and voluntary abandonment of WMD, and the causal factors behind that decision can prove beneficial for nonproliferation policy makers of the future.

To fully understand the causal factors behind Libya's decision, first the actual development of the nuclear weapons program itself will be discussed. Why did it decide to pursue nuclear weapons? What is it that Libya actually gave up? How extensive was its nuclear program? How much of a threat was Libya? Answering these questions requires a cursory examination of Colonel Mu'ammar al-Qadhafi's political ideology and the events leading to his revolutionary military coup in 1969. In chapter two, the reasons why Qadhafi pursued a nuclear weapons program and the actual development of the nuclear weapons program itself will be discussed. This will lay the foundation for the

policies that were employed to curtail Libyan state behavior, which will constitute chapter three.

There were two policy approaches used to influence Libyan state behavior concerning nuclear weapons. The carrot approach promised the lifting of unilateral and multilateral economic sanctions, and offered to reward Libya with profitable trade opportunities if it would abandon its nuclear weapons program. The stick approach used military strikes, the perceived threat of all out war and regime change, and diplomatic isolation to coerce Libya's policy reversal. Both approaches were used in the Libya model, and both claim credit for Libya's decision to abandon its nuclear weapons program. In chapter three, these approaches will be examined to determine the various strategies that were employed during the Libya model. These various strategies were used by both international and unilateral actors to change Libya's state behavior.

In chapter four, the effects that these various policies had upon Libya will demonstrate the reasons for Libya's decision to abandon its nuclear weapons program. The effects of these policies were felt on many different levels and had varying success at influencing Libya's state behavior. By examining the reasons why Libya abandoned its nuclear weapons program, the effectiveness and weaknesses of the various nonproliferation policies become evident. After all, the purpose of this thesis is to determine which nonproliferation policies had the greatest influence upon Libya's decision to abandon its nuclear weapons program. These successful nonproliferation policies applied in the Libya model will be discussed in chapter five to determine which strategies and policies would be the most effective at dealing with future nuclear proliferation scenarios.

CHAPTER II

DEVELOPMENT OF THE LIBYAN NUCLEAR WEAPONS PROGRAM

To fully understand Libya's policy decision to abandon its nuclear weapons program, it is first necessary to look at the reasons why Libya pursued such a program in the first place before examining the actual development of the program itself. Before analyzing the possible reasons that Libya and its leader, Colonel Mu'ammar al-Qadhafi, in particular chose to pursue nuclear weapons, it is prudent to examine what was occurring in Libya under the King Idris al-Sanusi monarchy that might have helped shape the political ideology of Qadhafi and the new revolutionary government, which would inevitably shape Libya's policy decisions. Clear anti-West and anti-imperialistic views took shape in Libya under the Sanusi monarchy preceding Qadhafi's military coup. Once Qadhafi was in power, he used these anti-West and anti-imperialistic sentiments to help shape his political ideology. His political ideology was based upon Arab nationalism, non-alignment regarding foreign policy, Arab unity, and various security concerns. Therefore, an examination of Qadhafi's political ideology will illuminate the reasons behind his decision to pursue nuclear weapons.

Following the examination of Qadhafi's political thought and its relation to his decision to pursue nuclear weapons, the actual development of the Libyan nuclear weapons program itself will be examined. For the purpose of this thesis, the Libyan nuclear weapons program will be divided into three distinct stages of development base

upon the means that Libya employed to acquire nuclear weapons. During each of these stages of development Libya used a different approach to obtain nuclear weapons. These varying approaches included attempts to purchase nuclear weapons directly from state actors (Stage One, 1970-1979), developing an indigenous nuclear weapons program (Stage Two, 1980-1996), and the development of a clandestine nuclear program that included purchasing materials and technologies from a non-state actor through the A.Q. Khan network (Stage Three, 1997-2003). Of course, the decision to abandon the clandestine nuclear weapons program on December 19th, 2003 signaled the end of the development of the Libyan nuclear weapons program. The issue of whether or not Libya has resumed its clandestine efforts towards nuclear proliferation since its policy change will not be addressed. For the purpose of this analysis, the December 19th, 2003 decision will mark the end of the nuclear weapons program in Libya. Therefore, the purpose of this chapter is to determine why Libya sought to obtain or develop nuclear weapons and to trace the actual development of the program up until it was abandoned.

Background: The Seeds of Revolution

Before examining Libya's first attempts at acquiring nuclear weapons, it is critical to have some understanding of Libyan history from the inception of independence in order to understand why Libya's new revolutionary government sought nuclear weapons, despite the signing of the Nuclear Nonproliferation Treaty (NPT) by King Idris al-Sanusi. Clearly, the new revolutionary government differed from the Sanusi monarchy when considering the nuclear ambitions of Libya. What was at the heart of this policy reversal to pursue nuclear weapons? Were there actions of the Sanusi monarchy that caused this

radical policy shift concerning nuclear weapons? To answer these questions, the monarchy of King Idris al-Sanusi will be briefly examined to show the pro-West attitude and policies of the Libyan government until the military coup in 1969.

The United Kingdom of Libya proclaimed its independence on December 24th, 1951. King Idris al-Sanusi became the head of the Libyan government and close ties with the West developed. These close ties arose because the Sanusi monarchy owed its existence and survival as a newly formed state to the United States and Great Britain. In fact,

The country was created at the behest of the western powers who provided all of the country's expertise and aid during the first decade after independence. In particular, warm relations between the United States and Libya served the interests of both parties, and US companies would assume a leading role in developing the country's oil industry. (Vandewalle 2006, 44-45)

Libya owed its very existence to the United States and Great Britain, and the economic aid given by the United States and Great Britain during the first decade of Libya's independence helped sustain the Sanusi monarchy. The United States would play a critical role in the development of the oil infrastructure of Libya, which was its most precious natural resource, enabling Libya to survive economically. By the end of 1959, U.S. support of the Sanusi monarchy becomes even more evident as "the United States would spend more than \$100 million in aid to Libya, making the country the single biggest per capita recipient of US largesse in the world" (Vandewalle 2006:45). This support translated into good relations between Libya and the West. Without this economic assistance from the West, the Sanusi monarchy had little hope of remaining in power.

When the Sanusi monarchy came into power it ruled over a geographic area that was fraught with tribal conflicts and had few of the defining characteristics of a unified state. For example, Libya “was totally dependent on these two powers [US and Great Britain] for economic and military aid” and “both powers pushed for Libyan independence even though the fragmented country had none of the basic ingredients that constitute a viable nation-state” (El-Kikhia 1997, 109). An example of one of these basic ingredients that Libya lacked was a sense of national unity. The fragmented state had no strong unifying factor that brought the people together as Libyans because none had previously existed. The underlying and important point being made is that Libya lacked national unity and the Sanusi monarchy owed its survival to the support and aid given by the United States and Great Britain both economically and militarily. This translated into warm relations between the Sanusi monarchy and the West. As shortcomings in the Sanusi monarchy emerged, the Libyan people began to correlate the failure of the government’s ability to meet many of the basic needs of the people with the West’s heavy influence in the area.

First, this economic support given to Libya went mainly towards the development of the oil industry which became the dominant factor within the Libyan economy. The dominance of US companies in the development of the emerging oil infrastructure of Libya proved profitable for both sides. For example, by 1970 oil production in Libya had reached an all time high of “3.7 million barrels per day – a figure which represented the entire capacity of the country’s pipeline systems” and “oil provided 99% of Libya’s revenues and constituted all of its exports” (Vandewalle 2006, 89). Concessions on most of the revenue collected from this oil production were granted to a select group of people

close to the Sanusi monarchy. Despite growing corruption allegations, the Sanusi monarchy continued “the persistence of personal connections [in] providing access to those revenues...[which] made personal enrichment at the expense of the country’s overall development inevitably attractive” (Vandewalle 2006, 71). These individuals who had access to this new influx of oil revenue sought personal gain instead of overall national growth. Although King Idris al-Sanusi and a select few close to the monarchy profited from this mutually beneficial relationship, the Libyan people did not prosper and allegations of corruption reached all levels of the Sanusi monarchy. This oversight or failure by the Sanusi monarchy to correct the corruption concerning oil production and the disparities created in the Libyan economy caused by the influx of huge oil revenues created domestic opposition to the monarchy, and the correlation between the ineffectiveness of the Sanusi monarchy and the West’s support of the corrupt monarchy caused anti-West sentiment to grow amongst the revolutionaries.

Another sharp criticism of the Sanusi monarchy which helped spur the revolution was the security issues facing the monarchy and the policies that were adopted to address them. These security issues were based upon the weakness of Libya’s conventional military forces. To address these security concerns, King Idris al-Sanusi signed military agreements with Great Britain and the United States in 1953 and 1954 respectively giving them access to military bases. For example,

From 1954 to 1971 the USA enjoyed a profitable presence in Libya through the Wheelus Air Force Base.... In exchange for the airfield, the USA gave impoverished Libyans an average of \$2 million per year beyond other aid it was already providing. (Zoubir 2002, 31)

This foreign military presence in Libya was accepted by King Idris al-Sanusi for two main reasons. First, the revenues received for use of the Wheelus Air Force Base helped

support the monarchy economically, so that the Libyan conventional military forces could be strengthened. The other reason for this presence was that it also provided the Sanusi monarchy with foreign military assistance should Libya face a threat from a foreign invasion. Therefore, these military agreements were beneficial to the Sanusi monarchy both economically and militarily. The results of alleviating security concerns through close relations with the West were that Libya had no nuclear weapons aspirations and that it signed the Nuclear Non-Proliferation Treaty. However, these close ties both economically and militarily caused much criticism to be directed towards the Sanusi monarchy amongst the Arab world and amongst the Libyan people in particular.

As the military coup drew near, the Libyan people and the Arab world in general began to criticize the monarchy about these close ties with the West and the mounting corruption within the Libyan government. These domestic and international criticisms began to grow as Arab nationalism in the region spread. First, the domestic criticisms stemmed from many other problems within the monarchy besides corruption. For example, according to many scholars there were a number of other domestic issues besides corruption within the Sanusi monarchy that led to the revolutionary coup. These included,

The king's hesitancy to rule effectively, the wrenching social dislocations caused by the rapid inflows of oil money, the halting and incomplete transition from a traditional to a more modern society, the rampant corruption and cronyism that followed the rapid inflow of oil revenues, and the kingdom's conservative positions in the inter-Arab politics within a region seething with Arab nationalism in the aftermath of the 1967 Arab-Israeli war: all these had hollowed out the monarchy to such a degree that few careful observers in the region, or beyond, were surprised when the actual coup took place. (Vandewall 2006, 78)

These domestic criticisms stemmed from the ineffectiveness of the monarchy to alleviate Libya's economic problems and the corruption within the monarchy itself. There were

large influxes of oil revenues that the Libyan people did not benefit from because of the corruption of the monarchy. The conservative position taken by the Sanusi monarchy in inter-Arab politics concerning Israel and Arab unity was largely influenced by King Idris al-Sanusi's warm relations with the West. The economic disparities and wealth inequalities created by the West's influence upon the oil infrastructure combined with the close ties that the Sanusi monarchy had with the West which influenced Libya's conservative stance on inter-Arab politics, created a situation in Libya that was ripe for a revolution spurred by anti-West sentiments.

Also, coupled with the domestic criticisms, there were international criticisms throughout much of the Arab world in regards to the Sanusi monarchy and its relations with the West. Many Arabs in general felt that these warm relations with the West isolated Libya from the rest of the Arab world. The West's influence at the Wheelus Air Force Base caused much anti-imperialism criticism, but

none of the criticism was more damaging than that launched by Nasser of Egypt, who accused the monarch of making Libya a foothold for imperialism. Ultimately Nasser dislodged American and British influence and replaced it with an Egyptian seed that germinated in the person of General Qaddafi. (El-Kikhia 1997, 110)

This international criticism of the Sanusi monarchy by Nasser of Egypt played a large role in the development of Qadhafi's political ideology. The strength of Nasser's anti-imperialistic criticism was further heightened by the strong Arab nationalism movement in the region at that time. Therefore, both domestic and international criticisms based upon the ineffectiveness and corruption of the Sanusi monarchy and its allowance of the West's influence in the region through the leasing of the Wheelus Air Force Base helped ignite a revolution based upon anti-West and anti-imperialistic arguments.

Qadhafi and the Libyan revolutionaries would take control of Libya in a bloodless military coup on September 1st, 1969. The anti-West sentiment and anti-imperialist stance taken by the new revolutionary government is closely related to if not entirely caused by the close ties that the Sanusi monarchy had with the West, particularly with the United States and Great Britain, and the strong Arab nationalism movement growing in the region. Through Arab nationalism, Qadhafi was able to solidify the legitimacy of the revolution and unify the Libyan people. The Libyan people embraced Qadhafi as their leader, and his political ideology would shape Libya's policies concerning the development of the Libyan nuclear weapons program.

Qadhafi's Libya: Reasons For Pursuing Nuclear Weapons

In the aftermath of the military coup, Colonel Qadhafi emerged as the leader. To this day he is affectionately referred to as simply "the Leader" by the Libyan people. Qadhafi and his inner circle of the Revolutionary Command Council (RCC) guided Libya through the bloodless military coup and were instrumental in the formation of policies for the new revolutionary government. Qadhafi's vision for Libya, fueled by his intense Arab nationalism, would be presented as an alternative to communism and capitalism. He saw "himself as a visionary leader, espousing his own political system, the 'Third Universal Theory,' which combined socialism and a brand of Islam drawn from the country's tribal practices that he expected to be implemented by Libyan people in a form of direct democracy," and with the vast oil revenues that Libya created he preached this Third Universal Theory abroad "with messianic grandeur" and felt that it "would bring the end to capitalism and communism" (Suskind 2006, 7). Indeed, Qadhafi was seen as

not only the revolutionary leader of Libya, but he was also seen as one of the first Arab nationalists to preach an alternative to communism and capitalism on the international stage. Qadhafi was catapulted onto the international scene and spoke internationally about Arab nationalism and Arab unity. He was “the leader of the first Islamist regime...10 years before the Iranian revolution, and in those 10 years he was the first to talk about Islam in power. When the Iranian revolution occurred, he was outflanked quite dramatically in terms of Islamic power” (Gwertzman 2003, 3). However, during those ten years, Qadhafi was enjoying a level of international attention that he would never again regain. The point being made here is that Qadhafi was seen both domestically and internationally as the leader of Libya and his political ideology would influence Libya’s decisions to pursue nuclear weapons.

From the beginning of the revolution, the views of Qadhafi and his RCC were inspired by Arab nationalism and anti-West sentiments. For example,

from the first official communiques onward it was clear that Libya’s military rulers were inspired by Arab nationalism and by a resentment of the West’s role in regional politics. They also seemed determined to chart a new political course for Libya within the Arab world and within the world at large. (Vandewalle 2006, 78)

His anti-West sentiments and his form of Arab nationalism affected how he made his foreign policy decisions concerning Israel, the West’s role in regional politics, and non-alignment. They affected how he portrayed himself internationally and how he handled the security concerns for Libya and the Arab world in general. Therefore, an examination of his political ideology, especially his views of Arab nationalism and anti-west/anti-imperialism, will help illuminate his decision to pursue nuclear weapons.

First, Qadhafi and many other Arabs at the time believed that the Sanusi monarchy's close ties with the West had essentially isolated Libya from the Arab world. The main goal of the coup was "to redirect foreign policy away from the interference of the West. Hence, Libya's isolation from the Arab world was ended" (Abdrabboh 1985, 31). Qadhafi used his intense Arab nationalism and Arab unity in general to legitimize his revolutionary government. In a state that was formed with little national identity and little infrastructure, Qadhafi used Arab nationalism and Arab unity to unify the Libyan people and solidify the legitimacy of his rule. For example,

Faced with a relatively low level of national identity, Qaddafi...viewed the promotion of Arab nationalism as one means to overcome the regional, tribal and clan divisions which plagued Libyan society...He [also] saw Libya as the heart, the vanguard and the hope of the Arab nation, and thus the custodian of Arab nationalism. (St. John 1987, 26)

Therefore, Qadhafi used Arab nationalism to both legitimize his rule domestically and to thrust Libya into the role of the protector of the Arab nation internationally. This role of protector or vanguard of Arab nationalism that Qadhafi placed upon Libya would influence his decision to pursue nuclear weapons. In fact, many of the Arab nationalists of this time expressed concerns about how a unified Arab nation could protect itself in an international arena where other states have nuclear weapons. If Qadhafi truly believed that Libya was the protector or vanguard of a unified Arab nation, then the pursuit of nuclear weapons would be a crucial step towards the survival of that unified Arab nation. Without a nuclear deterrent, the conventional forces of this unified Arab nation alone would be insufficient to protect it from the influences of both the East (the Soviets) and the West. Therefore, as will be discussed later in regards to in the actual development of the nuclear weapons program, Qadhafi sought nuclear weapons directly from other states

within his first year in power because of this deep sense of Arab nationalism and his vision for Libya as the protector or vanguard of a unified Arab nation.

While Arab nationalism was a strong unifying factor in the region, anti-West sentiment, especially concerning the West's support of Israel, was another strong unifying factor that led Qadhafi towards his decision to pursue nuclear weapons. The entire region saw a surge in Arab nationalism after the Arab-Israeli War of 1967. Many Arabs were displeased with Israeli/Palestinian situation and viewed the West's support and protection of Israel as a direct threat to the Arab region. Arab nationalists and Qadhafi in particular viewed Israel as an imperialistic colonization of the Arab region and an intrusion into the Arab world. To this day, much of the unrest in the Middle East region is caused by Arab-Israeli tension. Indeed Qadhafi has "continued to demand the 'dismantling of the WMD that Israelis have...Otherwise, [he argues] the Arabs will have the right to possess those weapons'" (Shoham 2004, 8). How could the Arab world prevent a nuclear attack from Israel without having nuclear weapons itself? If Qadhafi saw Libya as the protector of Arab nationalism, then it is likely that he sought after nuclear weapons to promote and protect his vision of a unified Arab nation from a nuclear Israel.

In addition, due to his strong anti-West and anti-imperialism sentiments, one of Qadhafi's first official actions was to remove the West's military presence from Libyan soil. Although U.S. and British forces did leave their respective military bases in 1971, the West's influence in the region through its support of Israel would still be prevalent and would still be subject to major criticism from Arab nationalist leaders. During a time of heightened Arab nationalism and in a region fraught with anti-West and anti-Israeli

sentiments, the nuclear state of Israel and the West's military presence in the region were perceived by Qadhafi as significant security threats to a unified Arab nation.

Next, Qadhafi and his revolutionary government also enacted a foreign policy holding to the principles of non-alignment. Qadhafi's government emerged in the midst of the Cold War and he attempted to provide his version of an alternative to communism and capitalism, which he called his Third Universal Theory. For example,

By late 1972 Qaddafi had begun to give the tenets of his strain of Arab nationalism a theoretical foundation with the articulation of what came to be called the Third Universal (or Third International) Theory. The Third Universal Theory was an attempt to develop a practical alternative to communism and capitalism, both of which Qaddafi, like many Arab nationalists, found unsuitable for the local environment. (St. John 1987, 28)

Not only did he have strong anti-West sentiments, caused by the Sanusi monarchy's warm relations with the West as discussed earlier, but he also had distaste for the Soviets comparing them to the West in terms of their imperialistic agendas. In Qadhafi's own words, "with regard to foreign policy, we will follow a policy of absolute neutrality without partiality to East or West" (St. John 1987, 71). This vision of Libyan foreign policy was also expounded by Bob Abdrabboh, who states,

Qadhafi's form of nationalism emerged as non-alignment. Libya rejected both the West and the East by affirming Libya's right to deal directly with either side regardless of its ideology. This goal took on the form of more than an attempt to balance blocs, it also emerged as fighting for Arab unity against any Western or Eastern influence. With this, Qadhafi grew steadily toward the desire for a more important role in the world stage. (Abdrabboh 1985, 32)

There are strong sentiments of anti-imperialism held by Qadhafi as seen in his rejection of both the West and the East. Qadhafi saw the East (the Soviets) as just another form of imperialism in that both the West and the East attempted to push their respective spheres of influence upon the Arab world. Qadhafi likens communism to a "proletarian

dictatorship” in which “a small elite monopolizes power in the name of the working class, who still remain exploited for ideological ends” (El-Khawas 1986, 16). In his view, both the East and the West had fundamental flaws that would not work in the Arab world. By not aligning with either the East or the West, Qadhafi’s intention was not to act as balancing bloc in the Cold War international arena, but rather to act as an independent and alternative approach to capitalism and communism. Therefore, Qadhafi’s non-alignment foreign policy decisions were consistent with his anti-imperialism stance and his Third Universal Theory.

Also, Arab unity played heavily on Qadhafi’s mind concerning the pursuit of nuclear weapons. Qadhafi gained international prestige through his efforts to help unify the Arab world, and his vision of Libya as the protector and leader of this unified Arab world was well documented throughout Qadhafi’s rule. For example, the extent to which Qadhafi was concerned with international prestige and Libya’s role in unifying the Arab world was demonstrated through many Arab unity attempts. In fact, Qadhafi took the lead in arranging unity treaties with Egypt and Sudan in 1969 (the Tripoli Charter), with Egypt and Syria in 1971 (Benghazi Treaty), between Egypt and Libya in 1972, with Algeria in 1973 (Hassi Messaoud Accords), with Tunisia in 1974 (Djerba Treaty), with Chad in 1981 (Tripoli Communique), and with Morocco in 1984 (Oujda Treaty). Although these many Arab unity plans ultimately failed, it is obvious that Qadhafi felt strongly about Arab unification plans and wanted Libya to be at the forefront of the international effort.

As these Arab-unification plans failed, Qadhafi turned towards terrorism to promote his form of Arab nationalism and remain on the international scene. He began

supporting terrorist activities in the 1970's, but by "the 1980s, Gadhafi was looking to be a player on the world stage, and terror was his means" (Suskind 2006, 3). The use and support of terrorism by Qadhafi was overt and often handled by Libya's own intelligence agents. The planning of attacks and the economic support of terrorist activities was used by Qadhafi as a means to protest the West's involvement in the Arab region. Libya's involvement with state sponsored terrorism reached unprecedented levels.

A 1976 CIA report cited Libya as 'one of the world's least inhibited practitioners of international terrorism.' The United States linked Qaddafi's regime to such major perpetrations as the 1972 Munich Olympics killing of Israeli athletes, the 1973 assassination of the U.S. ambassador to Sudan, and the 1975 raid of a meeting of the Organization of Petroleum Exporting Countries (OPEC) in Vienna. (Jentleson and Whystock 2005, 56)

These terrorist activities would eventually turn the international community against Qadhafi. He was placed on the U.S. State Sponsor of Terrorism list in 1979, and Libya would eventually face multilateral economic sanctions in 1992 due to Libya's involvement in the bombing of Pan Am 103 over Lockerbie, Scotland. These economic sanctions would eventually lead Qadhafi to pursue nuclear weapons through a non-state actor, the A.Q. Khan network. These economic sanctions were caused by Qadhafi's support of terrorism, and led to Libya's pursuit of a clandestine nuclear weapons program, which marked the height of Libya's nuclear ambitions.

Finally, the security concerns of Libya and the Arab world in general influenced his decision to pursue nuclear weapons. His concern was not only for the actual border security of Libya, but also for the well being of the Arab world in general. In fact,

Qadhafi [was] obsessed with the idea of Western influence dominating his own country. Hence, this [was] manifested in his over protection of the entire Arab world. He fears that the Arab world will lose its independence and 'become an American-Israeli colony. (Abdrabboh 1985, 33)

These concerns over the security of Libya and the Arab world in general played a role in his decision to pursue nuclear weapons. To protect both the Arab region in general and Libya's borders in particular, the acquisition of nuclear weapons was deemed necessary by Qadhafi. Indeed, the conventional military forces of Libya were weak and unable to handle Qadhafi's security concerns. During the first decade of Qadhafi's rule, Libya's conventional military forces had problems defending their borders. Libya's brief military effort in the border war with Egypt in July 1977 showed the limited capacity of Libya to wage even a short conventional war. Qadhafi's acknowledgment of this flaw can be seen by his pursuit of non-conventional capacities through biological, chemical, and nuclear weapons. Although the use of such non-conventional weapons in regional conflicts is unlikely, the protection and security gained by a nuclear deterrent would make up for the weak conventional forces of Libya. Therefore, Qadhafi pursued nuclear weapons because of the security issues raised from Libya's weak conventional forces, which were evident in the border war with Egypt.

Although Qadhafi also made the decision to pursue chemical weapons as a means to help bolster Libyan military power in the region, "nevertheless, given Israel's nuclear capability and overwhelming conventional military strength, even the deployment of Libyan chemical weapons on ballistic missiles would not significantly alter the Arab-Israeli balance of power" (Sinai 1997, 92). So despite the inclusion of other weapons of mass destruction such as chemical and biological weapons, the balance of power between the Arabs and Israelis would still favor the Israelis quite substantially. Without a large conventional military force, the only thing that could level the playing field between Arabs and Israelis was nuclear weapons. Even if Libya and other Arab nations boosted

the strength of their conventional military force to compete with the Israeli conventional military force, the nuclear weapons edge would still be owned by the Israelis. This Arab-Israeli balance of power would always favor the Israelis until Libya or another Arab nation acquired its own nuclear weapons.

Qadhafi and his inner circle intended to acquire nuclear weapons to bring balance to the Arab-Israeli power struggle in the region. Libya's intentions to develop a nuclear weapons capability "was officially confirmed in mid-April 1990, when Qadhafi called for the inclusion of a nuclear component in the development of a multifaceted deterrent force" (Sinai 1997, 97). Through the pursuit of a nuclear weapons capability Libya would ensure a multifaceted deterrent force against Israeli and Western influence in the region. Qadhafi felt that without a nuclear weapons component, Libya was defenseless against Western influence and possible Israeli aggression. Therefore, the balance of power in the Arab region in general and protection of the Libya borders in particular required that Libya develop or acquire nuclear weapons.

Various components of Qadhafi's political ideology affected his decision to acquire nuclear weapons. His view of himself as a revolutionary leader both in Libya and in the Arab world coupled with his intense sense of Arab nationalism, shaped the policies he enacted as "the Leader" of Libya. Without a nuclear weapons capability, Qadhafi recognized that the Arab-Israeli balance of power would always favor the Israelis. Since Qadhafi saw Libya as the protector of that unified Arab nation, the acquisition of nuclear weapons was a responsibility of Libya to help protect the region from Western and Israeli military power and influence. Now that the reasons for Libya's decision to pursue nuclear weapons have been explained, the remaining emphasis of the chapter will focus

on the actual development of the Libyan nuclear weapons program throughout each of the three stages of development.

Libya's nuclear weapons program can be divided into three distinct stages of development based upon the approach that Libya used to acquire nuclear weapons. The first stage (Stage One) was marked by a period of failed attempts to purchase nuclear weapons directly from state actors, the next stage (Stage Two) was characterized by the slow development of an indigenous nuclear weapons program, and the last stage (Stage Three) was dominated by the development of a clandestine nuclear weapons program through the use of non-state actors such as the A.Q. Khan network.

Stage One (1970 - 1979)

This first stage of nuclear development lasted from 1970 to 1979 and can be summarized as a period of failed attempts at procuring nuclear weapons and technology directly from state actors. Although the Libyan nuclear program was virtually non-existent during this time, the first attempts to procure nuclear weapons and technology took place during these years. These attempts clearly showed Libya's intent to obtain nuclear weapons and acts as the precursor to the development of Libya's indigenous nuclear weapons program. For example, within one year of power, Qadhafi approached China in 1970 to purchase a nuclear weapon and was turned down.

Then in 1977 he approached Pakistan and in 1979 India, but with the same result. Libyan efforts then turned to developing an indigenous nuclear weapons program with key equipment and technology coming from the Soviet Union. (Jentleson and Whystock 2005, 56)

The development of an indigenous nuclear weapons program will be discussed when analyzing Stage Two. For the purpose of this section, Libya's nuclear weapons program

during Stage One was clearly geared towards the purchase of nuclear weapons directly from state actors. During this time, Qadhafi approached and was denied by three different nuclear state actors including China, Pakistan, and India. The anti-West sentiment of the Qadhafi government can be seen by looking at who he decided to approach. The states who had acquired nuclear weapons by 1979 were the United States, USSR, the United Kingdom, France, China, Pakistan, Israel, and India. Of these the only states that Qadhafi approached were the ones that were not in the Western (U.S., U.K., and France) or Soviet camps, which would be consistent with his foreign policy views towards non-alignment.

Libya did not possess the equipment or the technical expertise to begin developing its own indigenous nuclear program during this first stage, but the ratification of the NPT in 1975 set Libya on a course towards the development of an indigenous nuclear weapons program. One must remember that no nuclear program existed under the Sanusi monarchy, so Qadhafi was essentially starting from scratch. When Qadhafi came to power there were no nuclear scientists or nuclear facilities in Libya. His only option to obtain a nuclear weapon was to attempt to purchase one from a nuclear-weapons state.

With the ratification of the NPT in 1975, Qadhafi sought to give Libya another option. After agreeing to comply with the tenets of the NPT, Libya began negotiations with nuclear powers aimed at developing a nuclear program for peaceful purposes in Libya. In 1977, Libya approached the Soviet Union to build a 440-megawatt power reactor near the Gulf of Sidra, but these plans were later abandoned (Sinai 1997, 98). However, the Soviets and Libya did reach an agreement concerning nuclear technological

support and assistance, and this agreement culminated in the delivery and establishment of a 10-megawatt research reactor. The possession of a working nuclear research reactor thrust Libya into Stage Two of its nuclear weapons program, characterized by the development of an indigenous nuclear weapons program.

Stage Two (1980 - 1996)

With Soviet assistance given after Libyan ratification of the NPT, Stage Two of development entails a period lasting from 1980 to 1996, and this stage can be characterized as a period of slow development of an indigenous nuclear weapons program. Although the Qadhafi regime ratified the NPT in 1975, which should have signaled a halt in the pursuit of nuclear weapons, it can be argued that the ratification was merely a means to get the necessary expertise, technical assistance, and materials needed to start an indigenous nuclear weapons program. Only after the ratification of the NPT would nuclear powers agree to help start a Libyan nuclear program for peaceful applications. However, even after ratifying the NPT, Qadhafi still made two overt attempts to purchase nuclear weapons from Pakistan in 1977 and India 1979, as was discussed in Stage One of development. Clearly the intent at acquiring nuclear weapons was still evident despite the ratification of the NPT.

Only after several negotiations did the Soviets agree to supply several components necessary for Libya to start an indigenous nuclear program. This assistance included technical expertise and the materials necessary to begin a nuclear program. This Soviet assistance “included...a 10 Mw IRT research reactor,...20 kg of U 235,...[and] 1000 tonnes of uranium ore concentrate (UOC)” (Murphy 2004, 3). This 10 Mw IRT

research reactor was transported to Tajoura, near Tripoli, and the construction of Libya's first nuclear facility was completed in 1979. Before the Tajoura reactor went online, Libya was required to enter into formal IAEA (International Atomic Energy Agency) safeguards agreements to regulate the Tajoura reactor. Once these IAEA agreements were completed, the Tajoura reactor was allowed to go online in 1980 signaling the official beginning of Stage Two and the start of Libya's indigenous nuclear weapons program.

The Tajoura Nuclear Research Center (TNRC) was the most significant nuclear facility in Libya and through the research conducted at this facility "Libya managed, very gradually, to build pilot-scale centrifuge facilities and to experiment with uranium enrichment technologies" (Shoham 2004, 6). The TNRC was the heart and soul of the Libyan nuclear weapons program. While the research reactor was intended to produce nuclear energy for peaceful purposes, Libya still pursued materials and technology to help create an indigenous nuclear weapons program. For example,

Throughout most of the 1980's, Libya aggressively pursued a WMD capability. It sought the materials and technology needed to establish a nuclear weapons program, including gas centrifuge technology, a modular uranium conversion facility, and two mass spectrometers to support centrifuge development. (Jentleson and Whystock 2005, 57-58)

Libya's aggressive pursuit of these materials and technology met with very limited success because of IAEA safeguards. Much of the expertise and materials that Libya sought were regulated by the existing IAEA safeguards and the existing nuclear nonproliferation regime. This regulation made development of a nuclear weapons program slow because Libya was unable to import the necessary equipment and technology required to develop a nuclear weapon.

However, during Stage Two Libya was able to import a large amount of nuclear material and had limited technological success towards developing a nuclear weapon despite IAEA safeguards. For example,

Libya imported a total of 2,263 metric tons of yellowcake. The total amount of uranium imported by Libya was 1,587 metric tons contained in 6,367 drums. Libya conducted a series of uranium conversion experiments in a previously undeclared facility during the 1980's. (Cirincione 2005, 322)

Therefore, during this stage Libya showed some development of its indigenous nuclear weapons program through the importation of nuclear materials under IAEA safeguards and successful small scale uranium conversion experiments. However, despite this aggressive pursuit of the technology and materials required to establish a nuclear weapons program, lack of technological expertise and difficulty in obtaining the necessary equipment under IAEA safeguards resulted in limited success of the nuclear weapons program development until 1992.

Due to Libya's involvement in terrorism, multilateral economic sanctions were imposed upon Libya by the United Nations Security Council (UNSC) in 1992. These sanctions were backed by international consensus and prevented the importation of many products that the Libyan nuclear weapons program needed to continue. The limited success that Libya enjoyed at developing a nuclear weapons program under IAEA safeguards came to a grinding halt with the imposition of these multilateral sanctions. As these economic sanctions took their toll on the Libyan economy, the importance of developing a nuclear weapons program gave way to more pressing economic concerns. Indeed, burdened by the high cost of developing its nuclear weapons program and hindered by the multilateral sanctions, the development of the Libyan nuclear weapons program from 1992 to 1997 experienced little to no activity.

Therefore, by ratifying the NPT, Libya was able to jump start the development of an indigenous nuclear weapons program. As was discussed during Stage One of development, Libya sought to acquire nuclear weapons directly from other state actors. During Stage Two of development, Libya used the ratification of the NPT to jump start their indigenous nuclear program, obtaining both nuclear materials and technology from other states under IAEA safeguards. However, throughout Stage Two of development, the intense amount of technical expertise and equipment required to successfully develop an indigenous nuclear weapons program was lacking due to regulation. While the ratification of the NPT did allow for the beginnings of the Libyan nuclear program, it also meant that Libya agree to IAEA safeguards that regulated the importation of the materials and technologies necessary for developing nuclear weapons. When the multilateral sanctions were imposed in 1992, the slow development of Libya's indigenous nuclear weapons program came to a halt. These multilateral sanctions deprived Libya of the foreign technical assistance it needed regarding centrifuge technology and the enrichment of uranium. While Libya was under multilateral sanctions, its nuclear weapons program faced many obstacles. In order to remove these obstacles, Libya looked to the assistance of a non-state actor, the A.Q. Khan network, which would dominate Stage Three of development.

Stage Three (1997 - 2003)

Stage Three, which lasted from 1997 to 2003, showed an increased effort to develop nuclear weapons and it is distinctly marked by the clandestine efforts of the government to procure nuclear weapons and technology through the A.Q. Khan network,

a non-state actor. A.Q. Khan, also known as the father of the Pakistani bomb, created an international network, including middlemen and foreign companies, for the purpose of selling and delivering nuclear technology to states or organizations seeking nuclear weapons. The Khan network was an extensive nuclear proliferation ring and consisted of “middlemen and engineers in Turkey, Germany, Switzerland and Britain, as well as Kazakhstan, Dubai and Malaysia, [who] were also closely involved in the clandestine effort” (Shoham 2004, 6). Through a series of international contacts and corporations, Libya finally found the necessary foreign technical assistance and technologies that it required to develop its nuclear weapons program.

As early as 1997, Libya began purchasing centrifuges, which are a critical component in enriching uranium to weapons grade material for use in a nuclear weapon, from the Khan network. “Centrifuges separate weapons-usable Uranium 235 from the far more common U238 isotope in a process that eventually creates highly enriched uranium (HEU)” (Fidler et al. 2004, 6). Libya’s goal was to create a facility that could produce enough highly enriched uranium (HEU) for the production of nuclear weapons. Through the Khan network, Libya was able to procure centrifuges and centrifuge technology. For example,

In 1997, Libya acquired 20 pre-assembled P-1 centrifuges and the components for another 200. Libya constructed three different enrichment cascades, but only the smallest (using 9 centrifuges) was completely assembled by 2002. In 2000, Libya received 2 centrifuges of a more advanced design (P-2 using maraging steel) and placed an order for 10,000 of those. Assistance on centrifuge enrichment reportedly came from A.Q. Khan. (Squassoni and Feickert 2004, 3)

This was quite a large order, especially when considering that there are more than one hundred components in one P2 centrifuge and Libya placed an order for 10,000 P2 centrifuges. This order alone included over one million parts, but this purchase was a

necessary requirement to create a facility that could produce material for nuclear weapons indigenously. It is important to note that the multilateral economic sanctions imposed upon Libya were not lifted until 1999, but the purchase of the 20 pre-assembled P-1 centrifuges and the components for additional centrifuges was made while multilateral sanctions were still in effect. In essence, the multilateral sanctions did little to prevent Libya from acquiring this technology through non-state actors, such as the Khan network because the existing nuclear nonproliferation regime lacked the capability to deal with non-state actors.

If this order had been completed and assembled, Libya would have had the indigenous capability to produce enough highly enriched uranium (HEU) for several nuclear weapons a year. This centrifuge plant would have significantly increased the ability of the Libyan government to create a nuclear weapon. In fact,

A centrifuge plant with 10,000 P2 centrifuges would have a capacity of roughly 50,000 swu/yr. At 200 swu per kilogram of weapon-grade uranium, this plant could produce about 250 kilograms of weapon-grade uranium per year...[and would have been able to produce enough HEU for more than ten nuclear weapons annually. (Albright and Hinderstein 2008, 52 and note 5)

Upon completion of the plant, Libya would have had the capacity to produce substantial amounts of HEU for use in nuclear weapons by as early as 2010 (Albright and Hinderstein 2008, 53). Through the Khan network, Libya was able to acquire the necessary technological aid and expertise that it required to develop a nuclear weapon.

In addition, The Khan network not only sold Libya a turn-key centrifuge plant that could produce enough HEU for several nuclear weapons a year, but also the components to support such a facility. To support this centrifuge plant, the Khan network sold Libya a “sophisticated manufacturing center, code-named Workshop 1001, to make

centrifuge components” (Albright and Hinderstein 2008, 52). The completion of these orders would have provided Libya with the necessary components to build an enrichment facility and a workshop to help support that facility should repairs need to be made. Both of these components were needed for Libya to truly have an indigenous nuclear weapons program.

Although the Khan network also had dealings with North Korea and Iran, two other states seeking nuclear weapons, the Khan network’s most ambitious sale was to Libya. For example,

The Khan network’s most ambitious sale was to Libya. It committed to supply Libya with a wide range of items, including a turnkey gas-centrifuge plant; the wherewithal to make centrifuges, nuclear weapons designs, uranium hexafluoride, and the ability to make uranium hexafluoride. (Albright and Hinderstein 2008, 52)

The Khan network sold Libya the material and technology to create the HEU used in nuclear weapons and even nuclear weapons designs. Although many of these purchases had yet to be delivered, this evidence suggests that Libya’s clandestine nuclear weapons program was thriving under the nuclear nonproliferation regime. Without the Khan network’s support, Libya would still have been struggling to develop its own indigenous nuclear weapons program. With the Khan network’s support, the Libyan clandestine nuclear weapons program purchased advances in enrichment capabilities, centrifuge technology, and nuclear weapons designs.

The size and sophistication of the Khan network in its dealings with Libya was staggering. With the help of the Khan network, Libya was able to purchase enough material and received enough technical assistance to have conceivably become the ninth state to obtain nuclear weapons. The technical shortcomings of Stage Two of

development were overcome through the clandestine efforts of Libya and its dealings with the Khan network.

Why then, when his nuclear aspirations were so close to being realized, did Qadhafi make the decision to abandon Libya's clandestine nuclear weapons program? Why after 33 years of attempting to acquire a nuclear weapons capability would Libya abandon its nuclear aspirations when that goal was so close to fruition? Did security concerns change in the region making the pursuit of nuclear weapons more detrimental to Libyan interests? Did isolation from the world community caused by Libya's support of terrorism motivate the decision to abandon nuclear weapons? Were the aggressive tactics taken by the Bush administration concerning Iraq's pursuit of WMD's influential upon Libya's policy reversal? Were there domestic factors that caused Qadhafi to take a more moderate stance towards the West? Was the aging oil infrastructure, which needed US expertise to be revitalized, an economic concern that caused Qadhafi to pursue more normalized relations with the West? Did Qadhafi think about his legacy and the state that he would be leaving Libya in upon his death? Did the seizure of the BBC China and the subsequent discovery of the Libyan clandestine nuclear weapons program cause Libya to abandon its efforts? Did the rewards for abandoning the program outweigh the perceived benefits of a nuclear Libya? There must have been some external factors or some impediments that caused a change in Qadhafi's views resulting in his decision to abandon the clandestine nuclear program.

To help illuminate the effect that these external factors or impediments had upon the Libyan decision to abandon its nuclear aspirations, it is prudent to look closely at the actual external factors themselves. By examining the actual factors before looking at the

reasons for Libya's change of policy, one can look at the external factors or impediments based on their own merits. The actual reasons given by Qadhafi and other Libyan officials for the change of policy will be examined in chapter four. The purpose of the next chapter (chapter three) is to fully examine all of the actions taken by the US and the international community that hindered Libya's pursuit of nuclear weapons and perhaps led to Libya's policy reversal. Once these external factors are analyzed as to their purpose and effect, then the actual reasons for the Libyan change of policy can be examined. The examination of the development of the Libyan nuclear program in relation to these external factors that were applied to alter proliferation activities might produce a model for dealing with nuclear proliferation amongst rogue or pariah states. The examination of the military and economic actions taken on behalf of the United States and the multilateral economic sanctions imposed on behalf of the international community will be examined next to outline the various policies and strategies used to influence Libya's decision to abandon its clandestine nuclear weapons program.

CHAPTER III

US AND INTERNATIONAL ACTIONS

In the previous chapter, the reasons for Libya's decision to acquire a nuclear weapons capability and the development of the actual program itself were analyzed. Now that the development of the program has been discussed, the goal of this chapter is to examine the U.S. and the international community's reaction to Libya's efforts towards nuclear proliferation. As efforts to develop a nuclear weapons program in Libya progressed, there were a number of unilateral and multilateral sanctions placed upon it which hindered the development of its nuclear weapons program. While many of the unilateral and multilateral sanctions imposed upon Libya were initiated for other reasons besides nuclear proliferation, namely terrorism, the effects of these sanctions hindered Libya's nuclear proliferation activities. These sanctions included oil and trade embargoes, imposed penalties upon foreign companies seeking to do business with Libya, economically weakened Libya, and effectively isolated Libya from the international community.

First, an examination of the nuclear nonproliferation regime that was in effect when Libya began its pursuit of nuclear weapons will be conducted to demonstrate its weaknesses and shortcomings in preventing nuclear proliferation which the success of the Libyan clandestine nuclear program demonstrates. Once the weaknesses of the nuclear nonproliferation regime are illustrated, U.S. unilateral actions against Libya will be

addressed. These U.S. unilateral actions included economic sanctions, diplomatic isolation, the use of military force. As international condemnation of Libya grew, these unilateral actions were complemented by a strong multilateral international sanctions regime and more proactive counter-proliferation techniques.

The use of coercive diplomacy, which entails actions by one state to change the behavior of another state, is at the heart of this chapter as well. There are two approaches towards coercive diplomacy, including the “carrot” (reward) approach and the “stick” (punishment) approach. According to the “carrot” approach, the best way to alter state behavior is to provide some sort of incentive or reward to that state if it complies. By offering to lift economic sanctions and trade embargoes to increase profitable trade opportunities the target state (Libya) is rewarded if it changes its behavior. On the other hand, the “stick” approach towards coercive diplomacy embraces the forceful change of a state’s actions through punishing that state for not changing its behavior. According to the “stick” approach, the best way to change a state’s behavior is to force it to change its behavior through punitive actions such as war, diplomatic isolation, and regime change.

The goal is to determine which approach towards coercive diplomacy, the rewards system (the “carrot”) or the punitive system (the “stick”), was the most influential in coercing Libyan state behavior. Both approaches were used in the Libyan model, and determining the effectiveness of these approaches can help shape a model for a more successful nuclear nonproliferation regime. Obviously, as Libya and many other states have demonstrated through their clandestine nuclear weapons programs, the nuclear nonproliferation regime that was in place had many shortcomings. The framework of this nuclear nonproliferation regime, which includes the International Atomic Energy Agency

(IAEA), the Nuclear Non-Proliferation Treaty (NPT), and other coalitions such as the Nuclear Supplier Group (NSG), will be examined to illustrate the strengths and weaknesses of the nuclear nonproliferation regime in relation to the Libya model.

The Nuclear Nonproliferation Regime

Before examining the unilateral and multilateral sanctions imposed upon Libya, it is necessary to first look at the international framework of the treaties and protocols dealing with nuclear weapons before Libya began its nuclear weapons program. What was the international framework concerning nuclear proliferation? What treaties had Libya ratified? How was Libya able to pursue nuclear weapons despite these agreements or restrictions? Which international treaties and protocols were violated when Libya pursued nuclear weapons? This international framework of treaties and protocols are the underpinnings of the nuclear nonproliferation regime. This framework of treaties and protocols includes the IAEA, the NPT, and the NSG. Indeed,

The nuclear nonproliferation regime is the oldest and most elaborate of the weapon control systems. It is founded on the basis of the NPT and...it provides for a variety of export control and supplier arrangements, the most important of which is the International Atomic Energy Agency (IAEA). (Cirincione 2005, 27)

Although the NSG is not mentioned in the above citation, it represented the supply side controls over nuclear proliferation, including banning the export of nuclear materials and technology to non-nuclear-weapons states. The NSG regulations affected Libya because the NSG members refused to export nuclear materials that Libya needed to acquire a nuclear weapon. As discussed in the preceding chapter, Libya made many efforts during Stage One of its nuclear weapons program to purchase nuclear weapons directly from nuclear-weapons states. Due to NSG protocols and adherence to those protocols, Libya's

efforts to purchase nuclear weapons directly from state actors were rebuffed. Also, in 1992 “the NSG expanded its export control guidelines, which until then had covered only uniquely nuclear items, to cover 65 ‘dual use’ items as well” (Cirincione 2005, 34). The addition of export controls monitoring “dual use” items that could be used for peaceful or military nuclear applications helped strengthen the nuclear nonproliferation regime on the supply side of nuclear materials and technologies. However, as the Libya model demonstrates, due to the development of second-tier proliferation rings such as the A.Q. Khan network, these additional export controls proved insufficient at preventing Libya’s nuclear proliferation activities.

The IAEA and the NPT will each be briefly analyzed in order to understand the components of the nuclear nonproliferation regime that was already in place when Libya decided to pursue a nuclear weapons program. This analysis will examine the reasons behind the failure of the nuclear nonproliferation regime in its efforts concerning Libya, namely the possibility of deception and the inability to enforce protocols.

Undoubtedly, the backbone of this nuclear nonproliferation regime was the NPT, which Libya ratified in 1975. Ratification of the NPT meant that Libya, as a non-nuclear-weapons state, agreed not to manufacture or receive nuclear explosives, agreed to the full-scope of IAEA safeguards concerning all nuclear activities, and agreed not to export nuclear weapons or materials except under IAEA safeguards (Nuclear Non-Proliferation Treaty). Indeed, the fact that Libya lied about its nuclear weapons ambitions despite its ratification of the NPT in 1975 showed an inherent weakness of the existing nuclear nonproliferation regime to enforce or regulate compliance with NPT protocols. As the Libyan model demonstrates, it is possible for a state to adhere visibly

to the NPT protocols, while deceptively and secretly developing a nuclear weapons program. The nuclear nonproliferation regime lacked the ability to overcome the possibility of deception. Therefore, in the Libya model, the nuclear nonproliferation regime's inability to enforce compliance of protocols and the possibility of deception demonstrated the weaknesses of the existing nuclear nonproliferation regime and allowed for Libya to pursue a clandestine nuclear weapons program.

Libya agreed to IAEA safeguards in 1980, as a prerequisite for the activation of the Tajoura nuclear research reactor. The mission of the IAEA has three components. The first is to assist "in planning for and using nuclear science and technology for various peaceful purposes," the second is to implement "nuclear safety standards and, based on these standards, promotes the achievement and maintenance of high levels of safety in applications of nuclear energy," and the third is to verify "through its inspection system that States comply with their commitments, under the Non-Proliferation Treaty and other non-proliferation agreements, to use nuclear material and facilities only for peaceful purposes" (International Atomic Energy Agency Mission Statement). Both the acquisition of the Tajoura research reactor and the ratification of the NPT, which were discussed in chapter two, placed Libya under IAEA safeguard controls allowing for the inspection of declared nuclear facilities. As the Libyan model shows, a clandestine nuclear weapons program can exist under the IAEA safeguards. This proved to be a major shortcoming of the IAEA safeguards of the time.

It was not until 1991 that the Additional Protocol was proposed in order to overcome that particular shortcoming. It particularly addressed the issue of building clandestine nuclear facilities through second-tier proliferation rings which are networks

that are free from the nuclear nonproliferation regime's restrictions such as the A.Q. Khan network. The Additional Protocol sought to include these clandestine nuclear facilities under the scope of IAEA inspectors and safeguards by giving IAEA inspectors "access to assure the absence of undeclared nuclear material or to resolve questions or inconsistencies in the information a State has provided about its nuclear activities" (Additional Protocol to IAEA safeguards). The nuclear nonproliferation regime that existed when Libya began its pursuit of nuclear weapons proved to be ineffective at preventing Libya's pursuit of nuclear weapons. Although the Additional Protocol was proposed in 1991, it was not ratified by Libya until after its decision to abandon its nuclear weapons program, so its provisions for stricter IAEA safeguards concerning the inspections of clandestine nuclear facilities were only applied after Libya had decided to abandon its pursuit.

Unilateral Sanctions and Military Force

Next, there were unilateral actions taken by the U.S. in the form of embargoes, other economic sanctions, the severing of diplomatic relations, and military strikes to coerce Libyan state behavior. This period of unilateral actions began in 1979 when Libya was added to the US State Department's first list of state sponsors of terrorism and lasted until 2003 when Libya decided to abandon its WMD program. These unilateral actions entailed a combination of economic sanctions and military force, both the "carrot" and the "stick" approaches towards coercive diplomacy.

In particular, from 1979 to 1986 relations between the U.S. and Libya deteriorated rapidly. U.S. unilateral action during this time included both economic sanctions and

military force. This underlying theme of deteriorating relations between the U.S. and Libya during this time is expounded by Dirk Vandewalle when he states,

In the years between December 1979 – when Libya had been put on the US State Department’s first list of state sponsors of terrorism – and the April 1986 US bombing of Tripoli and Benghazi, several developments in the deteriorating relationship between the United States and [Libya] had taken place. These included the closure of the US embassy in Tripoli and of the People’s Bureau in Washington, the embargo of crude oil and then refined petroleum products from Libya, and finally, in January 1986, the comprehensive trade embargo against [Libya]. (Vandewalle 2008, 152)

As U.S./Libya relations deteriorated, both economic sanctions and military force were used against Libya. The unilateral economic sanctions represented the “carrot” approach towards coercive diplomacy, and the military force and diplomatic isolation applied represented the “stick” approach towards coercive diplomacy.

As stated earlier, the beginning of the U.S. unilateral response towards Libya was the inclusion of Libya on the U.S. State Department’s first list of state sponsors of terrorism in 1979. Libya’s inclusion on this list marked the first concerted U.S. effort to place unilateral sanctions upon Libya. Inclusion on this list entailed many restrictions including bans on imports and exports of arms and dual use materials to Libya and suspension of economic assistance to Libya. Dual use materials are items that can have both peaceful and military applications. While this represents the first unilateral actions taken against Libya, the effects of these sanctions upon Libya were minimal because Libya was able to find replacement markets to dampen the effect of the unilateral sanctions. The ability of Libya to find other states that would provide economic assistance, imports and exports of arms, and dual use items highlights the weakness of unilateral sanctions.

The additional unilateral economic sanctions applied during the Reagan administration were much more harmful to the Libyan economy than the restrictions imposed by the inclusion of Libya on the State Departments list of state sponsors of terrorism. In response to Qadhafi's support of the Iranian revolution, the Reagan administration broke diplomatic relations with Libya in 1981, expelling Libyan diplomats from Washington and closing the Libyan People's Bureau. In 1982 Reagan imposed an embargo on oil imports from Libya and banned technology transfers to the North African nation. "Despite the fact that the United States had been the single largest importer of Libyan oil in 1981, the 1982 ban on imports of Libyan crude had been offset by the country's ability to sell to the European market" and by the fact that the crude oil was still reaching U.S. markets as refined products (Vandewalle 2008, 153). The 1982 U.S. oil embargo upon Libya would have been much more successful had a multilateral European embargo also been applied. Although, the U.S. was the major importer of Libyan oil before the embargo, Libya had no problems finding replacement oil markets and thus was able to maintain its oil revenue, which accounted for the vast majority of its economic output. Libya's ability to find alternative oil markets in Europe lessened the effect of the unilateral sanctions and showed the need for multilateral economic sanctions in order to change Libyan state behavior.

Since the European markets relied heavily on Libyan oil imports, multilateral support for an oil embargo was lacking. The Reagan administration then enacted a set of comprehensive economic sanctions in an attempt to alter Libyan state behavior. Beginning in 1985, the Reagan administration enacted a ban on the refined oil products coming from Libya's Ras al-Unaf refinery. Later, due to terrorist attacks in Rome and

Vienna, in early 1986 Reagan invoked the International Emergency Economic Powers Act (IEEPA) to terminate most of the remaining economic activity between the U.S. and Libya. The IEEPA "grants the President authority to regulate a comprehensive range of commercial and financial transactions with another country in order to deal with a threat to the national security, foreign policy, or economy of the United States, if the President declares a national emergency" (IEEPA Title II of Public Law 95-223). The use of the IEEPA was the basis for economic sanctions and effectively severed all remaining economic ties between the U.S. and Libya.

While the effects of these sanctions were limited because Libya was able to use European markets to offset the U.S. unilateral sanctions, they were effective at illustrating a weakness in the Libyan oil economy. As discussed in chapter two, the Libyan oil infrastructure was built with the help of U.S. oil technology and expertise. These sanctions severely limited Libya's ability to acquire the necessary spare parts and U.S. expertise to maintain and maximize their oil infrastructure.

As part of the break in relations, the Reagan administration had imposed unilateral sanctions on the export of Libyan oil to the United States, the operations of American oil companies in Libya, and the supply of all except humanitarian goods to Libya, thus interdicting the supply of US oil field equipment on which the Libyan oil industry was based. (Joffe 2004, 222)

This supply of US oil field equipment and expertise was effectively curtailed by the comprehensive unilateral economic sanctions applied under the Reagan administration. In fact, "because the oil industry in Libya rested primarily on US technology and know-how, those sanctions were particularly damaging" (Zoubir 2002, 33). Since the Libyan economy was based primarily upon its oil revenues, the U.S. imposed unilateral sanctions to hinder Libya's oil sector. These unilateral economic sanctions represent the "carrot"

aspect of the U.S. coercive diplomacy towards Libya. If Libya would alter its state behavior, then Libya would be rewarded and these unilateral sanctions would be lifted. This phase of unilateral sanctions shows how the U.S. identified the needs of the Libyan economy and sought to hinder the acquisition of what the latter needed to coerce state behavior. However, since Libya was able to find replacement European markets, these unilateral sanctions were not as effective as they could have been. Indeed, the ineffectiveness of these U.S. unilateral sanctions became evident as Libya did not alter its state behavior after almost three decades of unilateral economic sanctions. Coupled with these unilateral economic sanctions, the Reagan administration also employed the “stick” aspect of coercive diplomacy which entailed military force and diplomatic isolation.

As relations deteriorated and the economic sanctions proved ineffective at shaping Libyan state behavior, the U.S. employed military force to coerce Libya to comply with U.S. demands to halt its support for terrorist activities. Under the Reagan administration there were a number of “show-of-force skirmishes in the Gulf of Sidra, culminating in the extensive bombings against terrorist camps, military facilities, and Qaddafi’s family compound on April 15, 1986” (Jentleson and Whystock 2005, 58). As early as 1981, after Reagan had decided to sever relations with Libya, the U.S. Air Force shot down two Soviet-made Libyan fighter planes over the Gulf of Sidra in a dispute concerning the extent of Libya’s territorial waters. The U.S. was conducting a series of war exercises just outside the territorial waters of Libya when these Libyan fighter planes were shot down. Some argue that these exercises were an attempt to provoke a response from Qadhafi in order to justify a legitimate U.S. military retaliation to solve the Libyan problem. In fact throughout the Reagan administration,

Some US officials admitted that ‘we wanted to provoke Qadaffi into responding so we could stick it to him, and we knew he would oblige us’, that ‘we’re aching for a go at Qaddafi’, and that, if Qaddafi ‘sticks his head up, we’ll clobber him; we’re looking for an excuse.’ (Zoubir 2002, 33)

In fact, due to Qadhafi’s strong anti-west stance and his anti-Israeli rhetoric, the Reagan administration actively pursued policies geared towards regime change. It was a widely held belief in the Reagan administration, that to alter Libya’s behavior would require removing Qadhafi from power.

The “stick” approach towards coercive diplomacy culminated in the April 15, 1986 bombing raids on Tripoli and Benghazi. The U.S. bombing raids targeted several suspected terrorist camps and Qadhafi’s family compound resulting in the deaths of many innocent civilians, including Qadhafi’s adopted daughter. These bombing raids were conducted in retaliation for Libya’s involvement in the bombing of an East Berlin disco club. Even though the U.S. has banned assassination attempts of foreign leaders, since Qadhafi’s family compound was a target and his adopted daughter was killed, Qadhafi was probably the target of the bombing raids. Although these attacks did spark European condemnation, they also showed that Libya was helpless against U.S. power. Whether it was the loss of his adopted daughter due to the bombings or the realization that Libya stood no chance against U.S. power, Qadhafi avoided further confrontation with the U.S.

Although the U.S. hoped the bombings would weaken the Qadhafi regime, they served instead to strengthen his power domestically. Unfortunately for the U.S., “in the eyes of his people, and of many Third World nations, Qadaffi emerged as the victim of American bullying and hegemonic power” (Zoubir 2002, 33). Many states condemned the military force used by the U.S. as disproportionate to Libyan state actions. The use of the “stick” aspect of coercive diplomacy was successful in that it did cause Qadhafi to

avoid further confrontation with the U.S. and it showed Qadhafi that Libya was utterly defenseless against U.S. power. This would eventually lead to Qadhafi's desire to normalize relations with the West, which will be discussed as a reason for Libya's abandonment of its WMD program in the next chapter.

From the 1986 bombings until the passage of the UN resolutions in 1992, relations between the U.S. and Libya had quieted down. With the exception of the 1989 threat of force concerning the construction of a chemical weapons facility in Rabta, relations with Libya did not deteriorate any further. This was due in part to the domestic pressures caused by the Iran-Contra scandal and Qadhafi's avoidance of further confrontation. The unilateral economic sanctions applied during this period showed the dependence upon U.S. technology and expertise in Libya's oil infrastructure, but failed to achieve the far reaching economic impacts that the U.S. had hoped for. This shows that the "carrot" aspect of coercive diplomacy must be multilateral to be truly effective. The fact that Libya was able to find replacement oil markets after the U.S. unilateral oil embargo shows that the unilateral approach was ineffective at coercing Libya's behavior. The unilateral military force and diplomatic isolation applied during this period represents the "stick" aspect of coercive diplomacy. While this action caused international condemnation, it was successful in preventing Qadhafi from seeking further confrontations with the U.S. and it showed how Libya was helpless against U.S. power. Although during this period neither approach was completely successful in altering Libyan behavior, they did begin to highlight the weaknesses of Libya.

International “Pariah” and Multilateral Sanctions

Although the unilateral actions of the U.S. showed limited success, the Libyan government continued to support terrorism and continued to develop its own indigenous nuclear weapons program. The terrorist bombing of Pan Am flight 103 over Lockerbie, Scotland in 1988 brought Libya under increased international pressure. By 1990, U.S. intelligence officials had determined that two Libyan agents were involved with the planning of the Lockerbie terrorist attack. The fact that Libyan agents were suspected of directly perpetrating this terrorist attack caused this issue to be brought before the United Nations Security Council (UNSC). The UNSC would adopt a total of three UN resolutions; the first was a resolution outlining the steps that Libya needed to take in order to satisfy the Security Council (Resolution 731), and the second and third resolutions (Resolution 748 and Resolution 883) were the economic sanctions that would be enforced until Libya complied with the Security Council's demands. These sanctions were not issued because of Libya's pursuit of nuclear weapons. They were issued in response to Libya's support of terrorist activities. However, these sanctions did affect Libya's ability to pursue nuclear weapons through economic sanctions and restrictions on arms trade. Each of these resolutions will be analyzed to determine how each one affected Libya's ability to pursue nuclear weapons.

The first UNSC resolution issued concerning Libya was Resolution 731. This resolution provided the backdrop for the next two resolutions because it outlined the actions that Libya needed to take to have the multilateral sanctions lifted. UNSC Resolution 731 contained four demands placed upon the Libyan government. These included the surrendering of the two Libyan agents responsible for the Lockerbie

bombing so they could stand trial, that Libya disclose all that it knew about the incident, that the Libyan government pay appropriate compensation to the families of the victims, and that it halt all of its terrorist activities and support of terrorist groups (UNSC Resolution 731). Although Libya's prior terrorist activities had been frowned upon by many nations, this resolution marked the first time Libya had received wide spread international condemnation. Despite the fact that since 1979 the U.S. had considered Libya to be a "pariah" state or at the very least a state of concern, the passage of Resolution 731 marked the first time that Libya was placed in a "pariah" status on the international level. This resulted in a multilateral approach towards coercing Libyan state behavior. The purpose of this resolution was to outline what steps Libya needed to take to avoid multilateral sanctions imposed by the UN (Hurd 2005, 504; O'Sullivan 2003, 181). Libya failed to meet these requirements in a timely fashion, and this led to the multilateral economic sanctions that were imposed upon Libya through UNSC Resolutions 748 and 883. Although Resolution 731 does not contain any actual economic sanctions against Libya, it marks for the first time Libya's status as a "pariah" state on the international scene and it paved the way for multilateral economic sanctions.

In March of 1992, Resolution 748 was issued containing the penalties for Libya's refusal to adhere to the requirements of Resolution 731. This resolution prohibited air travel to or from Libya, banned all arms sales to Libya, and asked other governments and international organizations to reduce the number of Libyan diplomatic delegations (UNSC Resolution 748). While these multilateral sanctions had little direct effect on the development of Libya's nuclear weapons program, they did solidify Libya's status as a

“pariah” state on the international scene. These sanctions effectively isolated Libya, and their intent was to force Libya to comply with international norms.

In late 1993, the UNSC issued another set of economic sanctions on Libya outlined in Resolution 883. This resolution froze Libyan assets abroad and banned the transfer of all oil technology to Libya (UNSC Resolution 883). As was discussed earlier, the Libyan oil infrastructure was based primarily on U.S. technology, but the unilateral sanctions imposed by the United States in the 1980’s meant that Libya had to get its spare parts from Europe. The sanctions in this resolution prevented Libya from obtaining spare parts for its oil infrastructure and new oil technologies from any state. One of the shortcomings of the unilateral sanctions imposed by the Reagan administration was that Libya was obtaining its spare parts and new oil technologies from European states. This resolution was meant to overcome that shortfall (Hurd 2005, 504; O’Sullivan 2003, 182). For the most part these sanctions had multilateral international support and had an effect upon the Libyan economy. For example, Ray Takeyk suggests that

The U.N. sanctions – particularly the prohibition on the sale of oil equipment and technology and a ban on financial transfers – hit Qaddafi where it hurt the most, undermining his government’s ability to extract and export its main source of revenue. Libya estimates that the sanctions have deprived the economy of \$33 billion, whereas the World Bank puts the damage at the lower but still daunting sum of \$18 billion. (Takeyh 2001, 64)

Resolution 883 in particular, which prohibited the sale of oil equipment and froze foreign assets, cost the Libyan government billions of dollars in revenue. The far reaching and potentially devastating affects of multilateral economic sanctions can be used as a tool to entice a state to change its behavior.

However, despite the loss of billions of dollars in potential revenue, the Libyan economy was not as severely affected by the multilateral sanctions as it could have been.

Due to the need and dependence upon Libyan oil in some European markets, the UNSC decided not to apply multilateral economic sanctions upon the export of Libyan crude oil. By not applying multilateral economic sanctions to the exportation of Libyan crude oil, the Libyan economy, which was based largely on its oil revenue, remained relatively intact.

Significantly, neither resolution included restrictions on the purchase of Libyan petroleum itself or affected assets abroad concerned with oil imports and exports...the Security council did not interrupt this trade directly because of the significance of Libyan oil exports to several major European countries, notably Italy, Spain, Germany, and France... With the absence of oil and oil revenue from the UN sanctions regime, their effect was not as comprehensively devastating to the Libyan economy as the post-1991 sanctions were to the Iraqi economy. (Hurd 2005, 504)

However, the sanctions did have an impact on the status and prestige of Libya in its dealings with other states. In fact, during the 1990's Libya's main foreign policy goal was to get the sanctions lifted. Libya was tired of its "pariah" status and began looking at ways to re-emerge onto the international scene. When Libya finally agreed to hand over the terror suspects and the Lockerbie issue came to a close, these UN multilateral sanctions were lifted, but the U.S. unilateral sanctions remained.

The Iran and Libya Sanctions Act (ILSA)

Although the period from 1992 until the suspension of the UN sanctions in 1999 was mainly marked by multilateral international economic sanctions, the U.S. Congress enacted further unilateral sanctions against Libya that merit discussion. Since most economic dealings between Libya and the U.S. had already been severed under the Reagan administration, Congress included Libya in a piece of legislation that was originally intended to provide additional sanctions against Iran only. In 1995, the family

members of the victims of Lockerbie “successfully petitioned Congress to add Libya to a sanction bill initially intended only to strengthen US sanctions against Iran through penalties to non-American companies” (Hochman 2006, 70). This legislation was known as the Iran and Libya Sanctions Act (ILSA) and its goal was to affect the actions of foreign companies by applying penalties or withholding funds from any third party that dealt with Libya’s oil sector.

ILSA targeted private companies that invested in Libya’s or Iran’s oil sector. If companies invested more than \$40 million, they faced U.S. sanctions ranging from denial of U.S. exports to ineligibility for U.S. government contracts. Because U.S. sanctions already prohibited economic dealings by U.S. companies with Libya, ILSA’s effect was focused on foreign companies. (Schwartz 2007, 564)

The purpose of this legislation was to prevent foreign companies or individuals from dealing with Libya. Even though Congress did not have any legitimate control of the actions of foreign companies, they effectively created legislation that made dealing with Libya less appealing for foreign companies by including a range of sanctions. These sanctions included provisions directing “the Export-Import Bank of the United States not to give approval to the issuance of any guarantee, insurance, extension of credit, or participation in the extension of credit in connection with the export of any goods or services to any sanctioned person,” and the prohibition of “any United States financial institution from making loans or providing credits to any sanctioned person totaling more than \$10,000,000 in any 12-month period unless such person is engaged in activities to relieve human suffering and the loans or credits are provided for such activities” (ILSA of 1996 H.R. 3107). Since the Reagan administration had practically severed all economic relations with Libya, the executive branch could not apply any more economic sanctions. With strong petitioning from the Lockerbie families, Congress passed

legislation that would apply unilateral economic sanctions upon foreign companies if they had dealings with Libya.

Proactive Interdiction

Although Libya complied with the demands of UNSC Resolution 731, U.S. unilateral sanctions remained in place until Libya addressed U.S. concerns about its nuclear proliferation activities. After the attacks of September 11th, the George W. Bush administration enacted a more proactive approach towards dealing with nuclear proliferation in September 2003.

The administration's strategy describes proactive interdiction, working both internally and with friends and allies, to enhance the capabilities of the military, intelligence, technical, and law enforcement communities to prevent the movement of WMD materials, technology, and expertise to hostile states and terrorist organizations...[and] while interdiction has long been part of the US toolkit for countering proliferation, this administration has accorded international prominence, primarily through the vehicle of the Proliferation Security Initiative [PSI]. (Caves 2008, 40)

The Bush administration placed a greater emphasis upon action oriented solutions including searches and seizures of suspected ships and planes that might be delivering WMD technologies and materials, and specifically targeting states suspected of nuclear proliferation. For example, the PSI has a Statement of Interdiction Principles and it “declares that PSI members agree to interdict WMD transfer ‘to and from states and non-state actors of proliferation concern’” (Braun and Chyba 2004, 39). The PSI has grown from its original 11 countries to now include over 70 countries and has carried out 12 successful interdictions in which the delivery of WMD technologies and materials were seized. One such successful interdiction of importance in the Libya model is the seizure

of the BBC China, which was a ship delivering centrifuge technology and other nuclear material to Libya through the A.Q. Khan network. In fact,

In early October [2003] any pretense the Libyans still may have had of down-playing the extent of their WMD programs was shattered by the PSI interdiction in the Italian port of Taranto of the BBC China, a German-owned ship bound for Libya carrying centrifuge technology purchased from the Khan network. (Jentleson and Whystock 2005, 74)

This interdiction by the PSI was hailed by some to be the cause of the Libyan policy reversal concerning its nuclear weapons program. Indeed, just two months later, the Libyan government made an announcement that it planned on abandoning its nuclear weapons program and invited international inspectors to Libyan nuclear facilities. However, as will be discussed in the next chapter, secret negotiations between the U.S., U.K., and Libya had already been underway before the seizure of the BBC China, suggesting that there were other reasons for the policy change besides just the seizure of the BBC China. However, the timing of the seizure was so close to Libya's December 19, 2003 announcement to abandon its nuclear weapons program that it can be argued that the PSI successful interdiction of the BBC China was at the very least a trigger or catalyst for Libya's policy reversal.

Another example of the Bush administration's proactive approach towards counter-proliferation was the removal of Saddam Hussein from power in Iraq during the second Gulf War. The Bush administration justified the Iraq war on the basis that Saddam Hussein was developing a WMD program. The Bush doctrine took a proactive approach towards stemming nuclear proliferation. All out pre-emptive war and regime change were powerful examples of the "stick" approach towards coercive diplomacy. Although there are many differences between the Iraq situation and the Libyan situation,

the Bush administration's policy shift towards pre-emptive war and regime change could have played a critical role in Qadhafi's decision to abandon Libya's nuclear weapons program, especially when one considers the poor relations between the U.S. and Libya. If Qadhafi wanted to stay in power then he needed to find a way to normalize relations with the U.S.

Conclusion

This chapter started with an analysis of the nuclear nonproliferation regime that was already in place when Libya decided to pursue nuclear weapons. As was evident through Libya's success at obtaining nuclear materials and technology under this nuclear nonproliferation regime, there were several inherent weaknesses that the regime portrayed which prevented it from halting Libya's nuclear ambitions. Most notably, the fact that IAEA inspectors could only perform inspections on declared nuclear facilities allowed Libya to pursue a clandestine nuclear weapons program. The nuclear nonproliferation regime that was in place was unable to overcome the possibility of deception and did not possess the ability to enforce NPT protocols. These major shortcomings allowed for Libya to pursue a clandestine nuclear weapons program. The nuclear nonproliferation regime later tried to correct this flaw with the proposition of the Additional Protocol, which would allow IAEA inspectors to search clandestine nuclear facilities as well. However, since Libya didn't ratify the Additional Protocol until after its decision to abandon its clandestine nuclear weapons program, it is a mute point for this discussion.

Due to Libya's support for terrorism, unilateral and multilateral sanctions were placed upon Libya. Although these sanctions were not placed on Libya because of its nuclear weapons ambitions, they still affected Libya's pursuit of nuclear weapons to a certain degree. As was discussed earlier, the unilateral sanctions applied by the U.S. were not as effective as the U.S. hoped for. In particular, the U.S. oil embargo of Libya's crude oil had little effect upon the Libyan economy because Libya was able to find replacement European markets for its crude oil. Because Libya could find alternative markets, the U.S. unilateral sanctions had a delayed effect upon changing Libya's state behavior. The multilateral sanctions imposed by the UNSC had better success at affecting the Libyan economy. However, the failure to apply the multilateral sanctions to Libya's crude oil exports lessened the effect of these sanctions upon the Libyan economy. Indeed, most of the Libyan economy is based on these crude oil exports and since many European markets depended upon Libyan oil, the UNSC decided not to apply sanctions to that particular area. This oversight or omission limited the potential devastation of the multilateral sanctions. These multilateral sanctions would have been much more devastating to the Libyan economy if the crude oil exports had been included in the sanctions, and the devastation to the Libyan economy if these oil exports were included in the multilateral sanctions could have changed Libya's state behavior much sooner than it did.

Both the unilateral and multilateral sanctions represent the "carrot" (reward) approach towards coercive diplomacy. Perhaps the greatest success of the "carrot" approach in relation to Libya was that these sanctions prevented Libya from obtaining the necessary spare parts and new technologies that it required to help maintain and improve

its oil infrastructure. Also, although these unilateral and multilateral sanctions were not as devastating to the Libyan economy as they were to the Iraqi economy in 1991, the Libyan economy still lost billions of dollars. Indeed, much of the foreign policy of Libya during the 1990's was geared towards getting the sanctions lifted and therefore removing Libya from its international "pariah" status. The "stick" (punishment) approach to coercive diplomacy was also used to change Libya's state behavior.

As was discussed, under the Reagan administration there were a number of show of force skirmishes. Although these military actions brought international condemnation, they did alter Libya's behavior. In particular, after the 1986 bombings, Qadhafi no longer sought confrontation with the West on the international scene. After the 1986 bombings, Qadhafi realized that Libya was helpless against U.S. military power. Also, regime change and war have been used by the U.S. in dealing with Iraq. The use of these tools showed the U.S. unilateral approach was one based upon the punishment system or the "stick" approach. Although, they did not affect Libya directly, the war in Iraq and the removal of Saddam Hussein from power concerned Qadhafi and helped change the security concerns of Libya.

Under the George W. Bush administration, many proactive initiatives were begun to help strengthen the nuclear nonproliferation regime. In particular, the PSI was established to cut through treaties and international law to make searches and seizures of suspected ships and planes that might be carrying nuclear materials or technologies more expeditious. This proactive approach towards counter-proliferation is necessary especially when considering that clandestine nuclear weapons programs exist and when considering non-state actors selling nuclear secrets such as the A.Q. Khan network. One

successful interdiction made since the PSI was the seizure of the BBC China which was in route to Libya carrying centrifuge technology. The PSI and other improvements to the NPT, such as the Additional Protocol, were made to correct the flaws in the existing nuclear nonproliferation regime.

Although there were many U.S. and international actions taken to change Libya's state behavior, determining which actions influenced Libya's decision to abandon its nuclear weapons program will be helpful for future nonproliferation policy decisions. The use of unilateral and multilateral economic sanctions takes time to influence targeted state behavior change especially when considering that Libya was under unilateral sanctions from the U.S. for over twenty years and it was under multilateral sanctions from the U.N. for seven years. The U.S. also used unilateral actions that punished proliferation activities in the area including the use of regime change, diplomatic isolation, and war to achieve targeted state behavior change more expeditiously. Now that these U.S. and international actions have been discussed, focus in the next chapter turns towards the reasons why Libya decided to abandon its clandestine nuclear weapons program. By looking closely at these reasons, one will be able to determine which of the unilateral and multilateral actions were most influential in Libya's decision to abandon its nuclear aspirations and to what extent military force affected Libya's policy reversal.

CHAPTER IV

WHY LIBYA MADE ITS DECISION

With the development of the Libyan nuclear weapons program and the U.S. and international response explained, attention shifts to the actual reasons for Libya's policy reversal. It is important to note that since the early 1990's there were a series of secret negotiations between the U.S., Great Britain, and Libya regarding the Lockerbie issue. These three-party talks provided the means for Libya's policy reversal. The context of these negotiations will illuminate the underlying causes of Libya's decision. As was previously explained, there were several actions that the international community and the U.S. individually took that affected Libya. The effects of these actions upon Libya were felt in many different ways. By examining these effects, Libya's decision to abandon its nuclear weapons program becomes apparent. Through the secret negotiations and the effects of economic sanctions upon Libya, many reasons for Libya's decision to abandon its nuclear weapons program become evident. These reasons included relieving the economic effects of sanctions, changing security concerns, tiring of diplomatic isolation and international pariah status, new domestic pressures in Libya for policy moderation, and a mutually beneficial situation arising with the seizure of the BBC China that gave Qadhafi a save face option. Therefore, by examining the reasons why Libya abandoned its nuclear weapons program, a successful model of how to deal with a state that is pursuing nuclear weapons may be developed. By understanding what works when

considering nonproliferation, future policy decisions can be made upon the basis of proven success.

Before examining the reasons for Libya's policy change, it would be beneficial to explain the secret negotiations between the U.S., Britain, and Libya. These three-party talks provided the means for Libya's policy change. Since official diplomatic relations between the U.S. and Libya were severed in the 1980's, the only contact made between these states was done through back channels. According to Martin Indyk, who was the US Assistant Secretary of State when talks with Libya were begun in 1999, "the Clinton administration only began negotiations after insisting on the following two conditions: Libya cease lobbying for the UN to lift permanently its sanctions and agree to keep the bilateral talks secret" (St. John 2004, 391). Secrecy was an important factor for the U.S. because the Clinton administration did not want to appear to be negotiating with known supporters of terrorism. Following this agreement, the first meeting between the U.S. and Libya, with Great Britain acting in a mediatory capacity, occurred in Geneva in May, 1999. From this first encounter a number of secret negotiations would follow that would eventually lead to the December 19th, 2003 Libyan announcement that it was abandoning its WMD program. During these negotiations, the U.S. and Libya agreed on a number of pressing issues including the need for Libya to abandon its pursuit of weapons of mass destruction, which included Libya's clandestine nuclear weapons program. These negotiations highlighted the demands of both sides and helped illuminate the reasons for Libya's policy change.

Economic Effects of Sanctions

To begin, one of the most pressing concerns for Libyan officials that acted as a causal factor in Libya's decision to abandon its nuclear weapons program was the stagnation and stagflation of the Libyan economy due to economic sanctions. According to Libyan experts who submitted a CRS (Congressional Research Service) report for the U.S. Congress,

The burden of 30 years of economic sanctions had significantly limited oil exports and stagnated the Libyan economy, helping to tilt the balance against pursuing WMD. Further, Libya's elimination of its WMD programs was a necessary condition for normalizing relations with the United States. (Squassoni and Feickert 2004, 2)

The economic effect of sanctions upon Libya played a large role in Libya's decision to abandon its nuclear weapons program. In particular the sanctions imposed by the U.N. seemed to have a greater effect upon Libya than the unilateral sanctions imposed by the U.S. However, normalizing relations with the U.S. in order to revive the oil infrastructure also played a crucial factor, so the unilateral sanctions were effective to some degree. Examination of the economic effects of sanctions will focus primarily upon Libya's need for U.S. technology and expertise to revitalize its oil industry. Although many areas of the Libyan economy were affected by the U.N. sanctions, the need for normalizing relations with the U.S. became a critical goal for Libya and would be by the U.S. as a bargaining chip for Libya's policy reversal in regards to nuclear weapons.

Although unilateral sanctions had been imposed by the U.S. on Libya since Libya's inclusion on the State Departments list of state sponsors of terrorism in 1979, the Libyan economy was able to find replacement European markets to lessen the intended effect of the sanctions. When the U.N. sanctions were imposed upon Libya in 1992, the

option to find alternative markets was eliminated. Broad international support for the multilateral sanctions severely limited Libya's ability to thrive economically. For example,

The economic problems that began in the 1980s grew worse in the early 1990s. Libya's gross domestic product dropped 30 percent in 1993 compared to the previous year, and growth averaged less than 1 percent annually from 1992 to 1998. Unemployment reached 30 percent. Inflation was out of control, going as high as 50 percent in 1994, and per capita income fell in real terms. The combination of falling world oil prices, Qaddafi's economic mismanagement, and economic sanctions took a heavy toll on the Libyan economy. (Jentleson and Whystock 2005, 65-66)

During the time that U.N. sanctions were implemented the indicators such as gross domestic product, economic growth, unemployment rate, and inflation all point to a Libyan economy that was struggling. The point being made here is simply that the U.N. multilateral sanctions had a greater impact upon the Libyan economy as a whole than did the U.S. unilateral sanctions.

The multilateral sanctions affected other areas of the Libyan economy as well such as agriculture and the oil industry. First, according to the Libyans the agriculture sector was one of the hardest hit areas during the U.N. sanctions. These sanctions prevented the importation of goods that the Libyan agricultural industry needed to feed the country. The loss of revenue and the loss of life were the inevitable effect of economic sanctions.

Indeed, as admitted by Libyans themselves, UN sanctions were taking a 'tragic toll' on Libya, costing the country \$19 billion and resulting in as many as 21,000 deaths since their imposition in 1992. Libyans asserted that agriculture was the hardest-hit area, with shortfalls estimated at \$5.9 billion. (Zoubir 2002, 39)

Unfortunately for the Libyan people, they had to endure the effects of U.N. sanctions until Qadhafi's policy reversal. As is too often the case, it is the citizenry and not the

leaders who are the most affected by economic sanctions. Although the Libyan economy as a whole felt the effects of the U.N. sanctions, reversing Libya's decision to pursue nuclear weapons was not one of the conditions to remove the U.N. sanctions. It was a condition to lift the unilateral U.S. sanctions though, but the removal of those unilateral sanctions would not be discussed until the Lockerbie issue concerning the terrorist bombing of Pan Am flight 103 was resolved. Once the Lockerbie issue was resolved and UNSC demands outlined in Resolution 731 were addressed, then the U.N. multilateral sanctions were lifted. The U.S. maintained unilateral sanctions citing that Libya still needed to address Libyan other issues such as the pursuit of nuclear weapons.

An interesting point arises when considering that Libyan officials had offered to abandon their WMD program as early as 1999 in an attempt to lift the U.S. unilateral sanctions and normalize relations with the West, which were crippling the effectiveness of Libya's oil refining capability. The question then arises as to why this unconventional weapons issue was not addressed at this time.

The Clinton administration did not pursue the unconventional weapons question at this time...because its policy priority remained resolution of Pan Am 103 issues prior to additional engagement with Libya...Once those objective were achieved and UN sanctions were lifted, Indyk [US Assistant Secretary of State who opened talks with Libya in 1999] told the Libyans, US sanctions would remain in place until the unconventional weapons issue was resolved. (St. John 2004, 392)

The result was that the U.S. did not have to make any concessions to Libya to resolve the Lockerbie issue. U.S. unilateral sanctions were still firmly in place after the Lockerbie issue was resolved. By not giving up anything, the U.S. retained a strong bargaining chip to use when dealing with Libya on its issue of unconventional weapons. Since Libya had agreed to U.N. demands, the multilateral sanctions were lifted, and the U.N. no longer had a way to coerce Libyan state behavior in terms of unconventional weapons. Some

would argue that the U.S. could and should have resolved Libya's WMD issue in 1999.

However,

While US negotiators in 1999 might have felt conflicted about relinquishing the chance to facilitate Libyan disarmament, ultimately their fealty to the concerns of the Pan Am 103 families positioned the United States to achieve greater concessions from Qadhafi four years later. (Hochman 2006, 72-73)

By maintaining unilateral sanctions after the U.N. sanctions were lifted the U.S. still had something that Libya wanted, namely the removal of those sanctions. Since the U.S. still had unilateral sanctions in place that Libya needed removed, it enhanced the bargaining position of the U.S. going into the secret negotiations over Libya's disarmament and led to a much more comprehensive disarmament package than what was previously offered in 1999. Therefore, in the Libyan case where there were multiple issues that needed to be addressed, unilateral and multilateral sanctions were used together effectively in dealing with Libya's state behavior.

There were a number of economic hardships born by Libya during the U.N. sanctions, but the deteriorating oil industry in particular became a causal factor in Libya's decision to abandon its nuclear weapons program. In order to revitalize its oil infrastructure, the relationship between Libya and the U.S. needed to be improved. Libya needed U.S. expertise and technology, and this influenced its decision to abandon their WMD program. For example,

A broader economic interpretation stresses Libya's need for Western investment, particularly to refurbish its oil sector. Although Libya's satisfaction of the UN terrorism demands had ended the UN sanctions, only by squarely addressing the West's WMD concerns could Libya be assured of stable access to the foreign technology and advisers it needed to jump-start its economy and avoid domestic unrest. (Schwartz 2007, 574)

Libya desperately sought to normalize relations with the U.S. primarily because it needed help from the U.S. to boost its economy, which was predominantly based upon its oil industry. Once the U.N. sanctions were lifted, Libya had access to other markets to help boost its economy, but Libya needed and wanted U.S. expertise instead. Libya began to see the potential rewards for cooperating with the U.S. especially when considering their oil industry.

Furthermore, the importance for the need of U.S. expertise concerning Libya's oil industry surfaces when considering that the U.S. played a crucial role in the development of the oil infrastructure under the Sanusi monarchy, as was discussed in chapter two. Due to the crucial role that the U.S. played in the development of Libya's oil sector, Libya began to feel the effect of its decaying oil infrastructure and the U.S. unilateral sanctions started to affect the Libyan economy. In a 1999 interview Hammouda el-Aswad, the head of Libya's National Oil Corporation, explained Libya's need to lift the US sanctions. He stated,

The Americans knew our equipment, and they placed every item on the sanctions list. Then, when the U.N. embargo was imposed in 1992, the problem became even more complicated because we couldn't buy on the open market. Some machinery had been smuggled in, but we've now used up all our stores. We've had to go to junkyards to recondition discarded parts, and we've even attempted to manufacture our own parts, but we haven't been successful... Since [American companies] are way ahead of Europe in technology, especially in the enhancement of depleted fields, we need their help." (Viorst 1999, 71-72)

By playing a crucial role in the early development of the Libyan oil industry and by having something which the Libyans wanted, namely U.S. technology, the U.S. had a strong bargaining chip to use to reward Qadhafi if Libya gave up its nuclear weapons program. The unilateral sanctions deprived Libya of what it needed to revitalize its oil industry, and Libya would ultimately decide to abandon its nuclear weapons aspirations

in order to receive the U.S. expertise and technology that it needed to revitalize its oil infrastructure.

Although there were a number of economic effects caused by the use of sanctions, there also exists a negative effect of further isolation of the target state. Economic sanctions are imposed to isolate the target state to such a degree that changing state behavior becomes attractive. Unfortunately, the effectiveness of economic sanctions at isolating a targeted state also creates a situation in which this already closed society is further cut off from the rest of the world. Indeed, the purpose of economic sanctions is to change the behavior of target states so that they adhere to the international norms as a precondition to rejoining the international community. There are problems that arise from this situation when these closed societies become even more isolated due to sanctions including the difficulty these societies have at rejoining the international community and the difficulty for intelligence agencies to understand and monitor them. For example, “in Iraq and Libya, the downside of the economic sanctions imposed by the United States was that they simply shuttered already closed societies, making it extremely difficult for US intelligence to monitor internal developments” (St. John 2004, 402). This allows for these states of concern to secretly pursue activities that the international community wishes to prevent.

The Libya model is a clear example of such concerns coming to fruition. As the sanctions further isolated Libya, it became more difficult to monitor Libyan activity and allowed for a situation where Libya was able to develop a clandestine nuclear weapons program. The point being made is that although economic sanctions are effective at

isolating target states, it also further closes that society off from the rest of the international community and allows for the development of clandestine state behavior.

Changing Security Concerns

When considering the reasons why Libya abandoned its nuclear weapons program, “security concerns were certainly a factor: abandoning its WMD program actually provided Libya more security than continued pursuit of chemical or nuclear weapons” (Kaplan 2007, 3). Perhaps some of the most important factors for Libya’s policy reversal concerning nuclear weapons revolve around security concerns. After all, as was discussed in chapter two, one of the reasons that Libya decided to pursue nuclear weapons in the first place was security. Indeed, Libya’s concerns about a nuclear Israel, about having big nuclear power opponents such as the U.S., and about the weakness of its conventional forces, all created an environment where pursuing nuclear weapons was an attractive approach to alleviate security concerns. Obviously, the security concerns of Libya began to change because disarmament began to be viewed as providing more security than continued development of a nuclear weapons program, which had yet to produce a viable nuclear deterrent. The changes in these security concerns became apparent after the attacks of September 11th and were caused by several factors. These factors that altered the security concerns of Libya included an intensified U.S. interest concerning weapons of mass destruction, the U.S. and Qadhafi sharing a common enemy in al-Qaeda, the use of force in Iraq and Saddam Hussein’s removal from power, and the inability of Libya’s nuclear weapons program to actually produce a nuclear weapon. As these changes in security concerns unfolded, Libya found itself in a situation where

abandoning its nuclear weapons program would provide more security than continuing development.

First, after the attacks of September 11th the U.S. concentrated much of its foreign policy decisions upon preventing another attack, especially an attack that included the use of a WMD. Preventing rogue states from obtaining nuclear weapons was at the forefront of U.S. concerns. This renewed interest in WMD and nuclear nonproliferation created an environment where Libya's nuclear weapons program would become more symbolically valuable to the U.S. Indeed, in 1999 and 2000, during secret negotiations Libya offered the abandonment of its nuclear weapons program in exchange for normalized relations with the West. It was not until after the September 11th attacks and after the Lockerbie issue was settled, that this newly intensified U.S. interest in WMD's began to take hold.

While the Bush administration has attributed Qaddafi's shift on WMD to the implicit example carried in the U.S. invasion of Iraq, a more realistic interpretation is that Qaddafi has used the new U.S. interest in WMD to his advantage by trading away his now symbolically valuable weapons programs in exchange for favors from the United States and Britain. There is good evidence that Libya was not serious about maintaining its WMD arsenal and had begun to find it a burden; it had sought several times in 1999 and 2000 to bargain with the West over its weapons. (Hurd 2005, 522)

Libya's offer to abandon its WMD program during secret negotiations showed that it was attempting to normalize relations with the West long before its December 2003 announcement. According to Saif-al-Islam, Qadhafi's son, "his father changed course because he had to. 'Overnight we found ourselves in a different world,' said Saif, referring to the Sept. 11 attacks. 'So Libya had to redesign its policies to cope with these new realities'" (Miller 2006, 1). The attacks of September 11th brought a renewed interest in WMD for U.S. policymakers and brought terrorism to the forefront of the international agenda. This renewed interest brought an increased symbolic value for the

Libyan nuclear weapons program despite the fact that the Libyan nuclear program was still in the beginning stages and was far from weapons ready. However symbolic the increased value might have been, the important factor is that increased U.S. interest in WMD set the mood for intensifying negotiations with Libya over its nuclear weapons program, and this intensified interest affected Libya's security calculations leading to its decision to abandon its nuclear weapons program.

As discussed in chapter three, military confrontation with the U.S. had occurred during the Reagan administration over Libya's support for terrorism, and the U.S. increased interest in WMD caused Libyan officials to fear that another military confrontation regarding Libya's pursuit of nuclear weapons might also be possible. Libyan officials wanted to avoid further military confrontation with the U.S. and wanted to improve relations with the West. Therefore, the increased U.S. interest in WMD created a situation where the security concerns for both the U.S. and Libya changed. This intensified WMD interest allowed for negotiations concerning Libya's nuclear weapons program to be mutually beneficial to the U.S. in that it was a symbolic victory for nuclear nonproliferation and for Libya in that it prevented further military confrontation with the West.

Next, the attacks of September 11th also created a scenario where Libya and the U.S. shared a common foe in al-Qaeda. As was discussed in the previous paragraph, "there was a desire to avoid another military confrontation with the US, which might now be sparked by Libya's pursuit of WMD as well as its support for terrorism," and since Qadhafi was "under threat from fundamentalist Islamic groups in Libya and wanted allies," Libya's security concerns changed (Shoham 2004, 10). Many Islamic opposition

groups operated in Libya under Qadhafi. One such opposition group was al-Qaeda, which was the terrorist group responsible for the attacks on September 11th. Indeed, much of the domestic opposition that Qadhafi began to feel at home was from fundamental Islamic groups such as al-Qaeda. These Islamic groups felt that Qadhafi's domestic policies were too eccentric and too un-Islamic, "and therefore, he was regarded by the al-Qaeda types as no better than the Saudi government, no better than any of these other governments that they hate. He found himself, ironically, on the same side as all of these governments that he had excoriated for a decade at least" (Gwertzman 2003, 2). In particular, these al-Qaeda type groups felt that Qadhafi's political ideology was not Islamic enough. They supported mixing the tenets of Islam with government policy, and pushed for a more Islamic state in general. Qadhafi has always been considered eccentric in both his domestic and international policies, perhaps stemming from his perception of himself as a revolutionary leader. The underlying point is that as economic conditions worsened in Libya under the sanctions, Qadhafi faced an increasing amount of domestic opposition, including opposition from al-Qaeda type groups. Libya and the U.S. had a common foe in al-Qaeda after the September 11th terrorist attacks, and this common ground helped improve relations between the U.S. and Libya.

Also, the U.S. invasion of Iraq in 2002 and the removal of Saddam Hussein from power on the basis that Saddam was pursuing weapons of mass destruction, demonstrated the U.S. resolve in dealing with nuclear proliferation. Indeed, if the U.S. was willing to use all out war and regime change as tools for coercive diplomacy, then Libya must have had some security concerns about Libya becoming the next target, especially when considering the poor relations between the U.S. and Libya. There is evidence that the

U.S. did consider Libya a threat. For example, “in March 2002, the Pentagon’s Nuclear Posture Review listed Libya, along with Iran, Iraq, North Korea and Syria, as potential adversaries due to their history of hostility toward the West, links to terrorism, and unconventional weapons programs” (St. John 2004, 394). This clearly shows that U.S. intelligence felt that Libya’s past actions and past relations with the U.S. were sufficient enough to consider Libya as a potential adversary. Also, the neoconservatives in the George W. Bush administration, including Vice President Dick Cheney and Under Secretary of State John Bolton, were doubtful about the sincerity of the Libyan offers to abandon its WMD program.

One reason the Bush administration was able to take a more constructive course with Libya was that the White House, uncharacteristically, sidelined the administration’s neoconservative wing – which strongly opposes any offer of carrots to state sponsors of terrorism, even when carrots could help end such problematic behavior – when crucial decisions were made. (Leverett 2004, 2)

In fact, these neoconservatives were conspicuously left out of the loop during the negotiations between the U.S. and Libya concerning disarmament. During a meeting between Tony Blair and George W. Bush at Camp David in 2002, Tony Blair informed President Bush of Libya’s willingness to discuss its WMD program. The Bush administration then entered into secret negotiations with Libya shortly thereafter and “the bulk of the work was done by just six people: two each from MI6, the US Central Intelligence Agency and Libya” (Fidler et al. 2004, 4). One of the causes for the successful conclusion of negotiations was U.S. policy makers shifted foreign policy away from strict adherence to the “stick” approach. Since the neoconservatives did not want to employ any sort of “carrot” option the Bush administration chose to keep them out of the loop. By omitting the neoconservatives from the negotiating process, the Bush

administration successfully employed a more balanced strategy towards Libya using both the “stick” and the “carrot” approach. This shift was crucial to the success of those negotiations.

Furthermore, Libya’s security concerns began to change as the war in Iraq and the removal of Saddam from power began to play out. “Some Arabs who were in regular conversations with Libyan officials say the regime was increasingly desperate to secure a deal as the war in Iraq loomed, worried that ‘it would be next’ in some unspecified way” (Fidler et al. 2004, 3). Due to the weakness of Libya’s conventional forces and facing the possibility of regime change through U.S. military confrontation, a situation arose where Qadhafi’s security concerns would be better served through the abandonment of Libya’s nuclear weapons program. By agreeing to abandon Libya’s nuclear weapons program, Qadhafi could prevent another confrontation with U.S. military forces and remain in power. For Libyan policy makers U.S. willingness to use all out war and regime change to punish Iraq for its WMD program would be reasons for concern. What if Libya was next on the list? There was no reason for Libya to not be concerned. As was demonstrated in chapter two, military confrontation between the U.S. and Libya in the 1980’s showed that Libya was powerless against U.S. military might. What if the U.S. turned its military might on Libya and removed Qadhafi from power? The continued development of Libya’s nuclear weapons program created security concerns including the threat of all out war and regime change. Therefore, “evidence suggests...[that]the use of force in Iraq helped persuade him that the weapons he had pursued since he came to power, and on which he had secretly spend \$300 million (\$100 million on nuclear equipment and material alone), made him more, not less vulnerable” (Miller 2006, 1). By

agreeing to abandon the nuclear weapons program, Qadhafi could alleviate these security concerns. Therefore, Qadhafi began to view the continued development of Libya's nuclear weapons program as potentially harmful to Libya's security concerns and potentially harmful to himself as well.

Finally, as these security concerns began to change, the underlying fact that Libya had yet to develop a nuclear weapon remained. To continue to develop a nuclear weapons program that was not producing a viable weapon but instead was creating new security issues because of the actual development of the program itself, created a self defeating situation. The development of a program that was supposed to alleviate Libya's security concerns was actually causing newer and more pressing security issues. Continuing to develop the nuclear weapons program became an unattractive option. Indeed,

Some observers have characterized the decision as a simple calculation by Libya that it would lose its WMD programs through preemptive military action as had occurred in Iraq, so it was merely making the best of a bad situation, trying to buy some goodwill and preserve the regime. The program was also costly and had failed to reward Libya with anything of substance in return. (Schwartz 2007, 574)

As events in Iraq progressed and as Libyan fears of a preemptive military strike grew, Libya began to see the pursuit of nuclear weapons as a new and pressing security issue for Libya in general and Qadhafi's regime in particular. Indeed, when international inspectors arrived in Libya after the December announcement to abandon its program, many of the centrifuge parts that had been delivered to Libya through the A.Q. Khan network were still in their crates. These inspectors agreed that Libya's clandestine nuclear program was more extensive than what was previously thought, but the program

was still in the early stages of development. Libya lacked the infrastructure and technical expertise to develop a nuclear weapon.

Even if Libya managed to avert preemptive military strikes on its nuclear weapons facilities and Qadhafi managed to stay in power, continued development of the nuclear weapons program to a point where it was able to produce nuclear weapons would still be futile considering that Libya had no delivery system and no target to use the nuclear weapon against. For example, according to Mr. Ma'atouq, who was the head of Libya's clandestine nuclear weapons program, there was a debate within Qadhafi's inner circle about the continued development of the nuclear weapons program. He claims that during this debate he made the following point,

Let's assume we have these weapons. What would we do with them? Who is the target? Who would we use them against? The U.S.? We had no delivery system. Yes, nuclear weapons are a deterrent, but it's better to have nothing at all than a deterrent without a means of delivery. (Miller 2006, 3)

Therefore, the development of a nuclear weapons program would act as an ineffective deterrent when compared to Libya's big power opponents especially when Libya had no delivery system. For Libyan policy makers, further pursuit of nuclear weapons began to seem unattractive.

Diplomatic and International Isolation

Now that the economic and security concerns have been analyzed, emphasis can now be placed upon the effect that sanctions had upon Libya's diplomatic and international isolation. Indeed, as was discussed in chapter three, much of Libya's foreign policy in the 1990's was geared towards lifting the multilateral U.N. sanctions. With the imposition of UN resolutions 738, 741, and 883, Libya was placed in a pariah

status on the international scene. Both the unilateral and multilateral sanctions tarnished his international image and diplomatically isolated him, which denied him the international prestige awarded through international initiatives and cooperation. As time went by, the Libyans began to feel the effect of this diplomatic and international isolation. For example,

The Libyans had grown tired of being excluded from the world community. They were unable to send their privileged sons abroad to U.S. colleges, and they were suffocating under sanctions that limited everything from dry goods to key parts for oil refineries, many of which had slipped into disrepair. (Suskind 2006, 4)

There were travel restrictions placed upon Libya based upon its inclusion on the State Department's list of state sponsors of terrorism. The US embassy in Tripoli and the Libyan counterpart in Washington D.C. were closed. Most privileges that the elite of states enjoy were denied to the Libyan elite, and this situation became tiresome to Qadhafi and other Libyan officials.

Another example of the successful implementation of diplomatic and international isolation is demonstrated through the rhetoric that accompanied U.S. unilateral sanctions. The public critique of Qadhafi's regime and the naming and shaming strategies employed were particularly effective at promoting diplomatic isolation especially when those critiques are accompanied by international consensus. For example,

US policies aimed at isolating Libya, applied from the 1980s through 2003, successfully exploited Qadhafi's concern for his international image.... Ultimately, US policies that publicly critique the nature of a regime – 'naming and shaming' strategies, can be effective, especially if the condemnation is accompanied by international consensus. (Hochman 2006, 75-76)

The underlying point is that international consensus is crucial to fully enhance the effects of diplomatic and international isolation. Indeed, Libyan efforts to remove the unilateral sanctions were minimal from 1979 until 1992 indicating that Libya was not feeling the

effects of unilaterally enforced isolation. It was not until the U.N. sanctions were imposed in 1992 that Libya began to feel the full effect of diplomatic and international isolation. With strong international consensus, “naming and shaming” techniques designed at coercing a state’s behavior become more effective. “Still others observers have suggested that Libya’s WMD programs were not very successful, while ending Libya’s pariah status became particularly important to Col. Kaddafi” (Squassoni and Feickert 2004, 2). Eliminating Libya’s status as an international pariah state was a factor in Libya’s decision to eliminate its nuclear weapons program. Qadhafi might have considered his legacy and the awful state of affairs that he had led Libya towards. Removing the diplomatic and international isolation that resulted from Libya’s status as an international pariah was a causal factor in Qadhafi’s decision to abandon Libya’s nuclear weapons program.

Domestic Pressures

Despite the previously mentioned security concerns regarding domestic pressure applied by al-Qaeda opposition groups, other changes were occurring in Libya that caused Qadhafi’s policy reversal to abandon Libya’s nuclear weapons program. Major changes in global politics including the trend towards globalization and the fall of the Soviet Union, made the Libyan domestic ideology of confrontation with the West seem unattractive. As these major changes in global politics put pressure on the Libyan domestic ideology, a younger and more pragmatic group of policy makers arose in the Libyan bureaucracy, as Vandewalle notes;

Several factors facilitated the carrot-and-stick diplomacy. These include Libya’s disenchantment with its diplomatic isolation, its pressing need for economic

investment and expertise, and its internal political malaise. These factors had already spurred changes inside Libya prior to the December denouement. One such change is the increasing professionalization of Libya's bureaucracy as a younger, more technocratic and less ideological set of policy makers emerges. (Vandewalle 2008, 1)

Both the disenchantment with its diplomatic isolation and its pressing need for economic investment and expertise have already been discussed earlier. The internal political malaise refers to changes in Qadhafi's inner circle. In the mid-1990's a debate began in the inner circle of Qadhafi's regime

between 'pragmatists' stressing the need for structural economic reform and international investment and the 'hard-liners' wanting to continue defying the West....in 1998 [Qadhafi] sided with the pragmatists: 'We cannot stand in the way of progress,' announced Qadhafi...'The fashion now is the free market and investments.' (Jentelson and Whystock 2005, 77-78)

Qadhafi began to listen to these technocrats and pragmatists instead of the ideologues who continued to support defying the West. Policy moderation and cooperation with the West were strongly supported by these technocrats who saw normalizing relations with the West as a crucial element to alleviating Libya's economic concerns. Indeed, Qadhafi himself began to see that globalization was the new trend, and for Libya to become a more successful state, its status as an international pariah must be lifted. With the advice and support of this newly emerging group of technocrats, Qadhafi decided to abandon Libya's nuclear weapons program and normalize relations with the West.

On the other hand, there was also domestic pressure in the U.S. that indirectly affected Libya's decision to abandon its nuclear weapons program. The successful political lobbying of the Lockerbie families caused increased U.S. sanctions upon Libya and eventually led to a more complete disarmament package. Lobbying efforts conducted by this particular domestic group led to the inclusion of Libya in the Iran and

Libya Sanctions Act in 1996, which penalized foreign companies that did business with Libya. Their lobbying efforts also delayed discussions concerning disarmament until after the UN demands outlined in UNSC Resolution 731 were addressed and the Lockerbie issue was closed. As was discussed earlier, this created a situation in which a more complete disarmament package was offered by Libya during the secret negotiations between the U.S., Britain, and Libya.

Saving Face

There is one more causal factor that will be examined to help explain why Libya abandoned its nuclear weapons program. With the successful interdiction of the BBC China, which was a German owned ship carrying centrifuge technology destined for Libya and purchased through the Khan network, a mutually beneficial situation developed in which Qadhafi could save face and agree to disarmament without looking like he had caved in to U.S. demands. As was discussed in chapter three, the PSI (the Proliferation Security Initiative) greatly expedited searches and seizures of ships and planes suspected of transporting nuclear materials and technologies. The successful interdiction of the BBC China presented Qadhafi with an opportunity to make public Libya's clandestine nuclear weapons program. The seizure occurred in October 2003, and using the seizure as a starting point,

Gadhafi laid out what the United States and Britain secretly knew, for the most part, about his nuclear program. In November, some of the particulars of his disarmament protocol were decided. By December, the United States and Britain would be touring Libyan facilities, along with representatives from the International Atomic Energy Agency...In exchange, Gadhafi got what he wanted: The sanctions were lifted. Among the country's ruling elite, the whole matter was viewed as being artfully handled, with no discernible loss of face by the leader of the revolution. (Suskind 2006, 9)

The proactive nature of the PSI and the successful interdiction of the BBC China created an environment where Qadhafi could save face in relation to coming clean about Libya's nuclear weapons program without appearing to be caving in to U.S. demands. Qadhafi did not want Libyan concessions to be construed as him succumbing to the West's power. Instead, he wanted Libya's decision to be considered as adhering to international norms under the direction of international agencies. According to many accounts concerning the secret negotiations between the U.S., Britain, and Libya, the interdiction of the BBC China was a triggering event that helped precipitate the agreement. Indeed, Qadhafi's announcement about Libya's policy change came just two months after the seizure of the BBC China. It is unlikely that the timing of the December announcement so close to the interdiction of the BBC China was a coincidence. However, it is also doubtful that the seizure was solely responsible for Libya's policy change. Instead, as this chapter demonstrates, there were a number of causal factors that attributed to Libya's decision to abandon its nuclear weapons program including economic sanctions, new security concerns, diplomatic isolation, new domestic pressures, a new emerging international political and economic order, and a save face option.

CHAPTER V

CONCLUSIONS

Since Libya's decision to abandon its nuclear weapons program is one of the few examples of success towards nuclear nonproliferation, there are lessons to be learned regarding the effectiveness of the varying approaches used to influence Libya's policy reversal. As was discussed in the previous chapters, there were a number of causal factors that led to Libya's decision to abandon its nuclear weapons program including the economic effect of sanctions, changing security concerns, international isolation, domestic pressures, and a save face option. All of the above mentioned causal factors were caused by various actions taken by the international community and the U.S. Although there appears to be a myriad of causes for Libya's policy reversal, some of the actions taken by the U.S. and the international community had a greater influence upon Libya's policy reversal than others. Therefore, an examination of which actions influenced Libya's decision the most will help reveal possible nonproliferation policy options for the future.

Does the Libyan model for nonproliferation provide the basis for a broader international model to be applied to all non-nuclear-weapons states that are pursuing nuclear weapons? Or is the Libyan model for success merely an isolated incident that shows effective strategies for dealing with the Libyan case only? By examining the effectiveness of the nuclear nonproliferation regime, multilateral sanctions, unilateral

sanctions, military force, and proactive counter-proliferation strategies one can determine if the Libyan model provides methods for a broader international model to be applied to nuclear nonproliferation in the future or if the Libyan model merely provides examples of effective strategies employed based upon Libya's state specific criteria.

Undoubtedly, as the success of the Libyan clandestine nuclear program demonstrated, there existed gaps in the nuclear nonproliferation regime that allowed for the possibility of states to make false statements about their nuclear intentions and to develop clandestine nuclear weapons programs. Iran and North Korea are also examples of states that have signed and ratified the NPT but secretly pursued nuclear weapons despite visibly adhering to NPT safeguards and protocols. These "NPT cheaters" highlight the possibility of deception which is a weakness of the existing nuclear nonproliferation regime. In order for the nuclear nonproliferation regime to be more successful at preventing future attempts towards nuclear proliferation, there needs to be stricter enforcement guidelines in the safeguard agreements to uphold states to their international commitments.

However, enforcement of these nonproliferation commitments will be difficult for the nuclear nonproliferation regime both conceptually and logistically. The conceptual difficulties arise when dealing with non-nuclear weapons states that are seeking nuclear weapons but have not ratified the NPT, have not agreed to the IAEA safeguards, or have not added the Additional Protocol. How can the nuclear nonproliferation regime enforce a commitment that has not been made? Also, although there are a number of different ways to enforce these international nonproliferation commitments, no enforcement strategy will ever be able to stop all proliferation activities because of the possibility of

deception and clandestine nuclear efforts. The logistical difficulties are even greater. Who will pay for this enforcement? How can enforcement be completely successful in an increasingly global economy? Who will provide the countless ships and planes needed to police all of the ports and dockyards of the world? Although the conceptual difficulties of stronger enforcement protocols for the nuclear nonproliferation regime are great, the logistics of this enforcement would be both costly and increasingly difficult as the global economy becomes more integrated.

Despite these difficulties, even if the entire international community decided to increase the enforcement of international commitments in the NPT and the IAEA, the enforcement would still rely on intelligence activities, which may or may not have sufficient or correct information. Indeed, the entire nature of a clandestine program is to be secretive. While not all clandestine efforts are successful, the Libyan model shows that there is much that intelligence activities can miss. In the Libyan model, the clandestine nuclear program lasted from 1997 to 2003, and intelligence agencies knew little about the extent of Libya's secret dealings with the A.Q. Khan network until the interdiction of the BBC China. Indeed, two of the greatest shortcomings of the nuclear nonproliferation regime were that it had no means for inspecting undeclared clandestine nuclear facilities and it had no means to prevent nuclear proliferation through non-state actors. The Additional Protocol to the IAEA and the PSI were designed to overcome these weaknesses by allowing IAEA inspectors to search declared and undeclared nuclear facilities and by sharing intelligence, but reliable intelligence is still crucial to the success of these additions. Even if just one clandestine effort is successful and nuclear weapons fall into the wrong hands, then even a nuclear nonproliferation regime that is greatly

strengthened by enforcement guidelines would still be considered a failure. Therefore, the addition of some sort of enforcement mechanism to the nuclear nonproliferation regime will help strengthen efforts to prevent proliferation in the future, but stricter enforcement guidelines alone are likely insufficient because they rely on accurate and sufficient intelligence information which as the Libyan model shows can be lacking.

Another possible future addition to the nuclear nonproliferation regime could be a strengthening of the supply side restrictions on nuclear materials through increased enforcement guidelines. The NSG regulates this supply side and its regulation affected the development of the Libyan nuclear weapons program, and the effect of the NSG protocols even without strengthening enforcement was still significant. For example, Libya made several attempts at acquiring both nuclear weapons, during Stage One of development, and acquiring nuclear technologies and materials required to develop a nuclear weapon, during Stage Two of development, without any success. In other words, any time Libya approached a member of the NSG, such as China or India, and tried to obtain nuclear weapons or the technology and materials associated with nuclear weapons it was denied. Libya had no success dealing directly with state actors outside the controls of the nuclear nonproliferation regime.

While the NPT and the IAEA have issues concerning the possibility of deception and the secret development of nuclear weapons, the NSG shares none of these weaknesses because it restricts the supply side of nuclear materials. As long as the members of the NSG are responsible parties and uphold to the protocols of restricting the importation and exportation of nuclear weapons materials to non-nuclear-weapons states, then deception is taken out of the equation because even if a non-nuclear-weapons state

was untruthful about its nuclear ambitions, the importation and exportation of nuclear weapons materials could still be restricted if that state was suspected of nuclear proliferation activities. If a state is suspected of nuclear proliferation activities then the NSG should halt all imports and exports of nuclear materials to that state, even materials needed for the peaceful nuclear activities. Although this suggestion goes against the NPT protocol that states that no NPT member state shall be discriminated against with regard to nuclear materials used for peaceful purposes, this addition to the NSG would greatly enhance the power of the nuclear nonproliferation regime to enforce nonproliferation protocols. Due to the weakness that the NPT has concerning the possibility of deception, it is the NPT that should be modified to allow for stronger NSG enforcement of nonproliferation by withholding all nuclear materials, even those used for peaceful purposes from states suspected of nuclear proliferation activities.

Since the NSG is unaffected by deception, enhancing its enforcement features and broadening its scope to restrict all nuclear materials might help prevent nuclear proliferation in the future. Indeed, in 2004, after Libya's policy reversal, the nuclear nonproliferation regime did strengthen the export controls under the NSG by adding a "catch-all mechanism permitting member states to prevent any export that they suspect might be used for a nuclear weapons program, even if the blocked item does not appear on any of the NSG's control lists" (Cirincione 2005, 34). While this addition strengthens the NSG export controls it does not go far enough to prevent nuclear proliferation activities in the future. As the Libya model demonstrates, second-tier proliferation rings such as the A.Q. Khan network exposed weaknesses in the NSG export controls in dealing with clandestine networks. By including a provision to allow the NSG to

completely withhold all nuclear related materials and technologies, even those used for peaceful applications, from states suspected of nuclear proliferation activities, the NSG will be able to effectively curtail nuclear proliferation activities in states pursuing clandestine nuclear weapons programs. States will face the possibility of being completely cut off from all nuclear related materials if they are suspected of secretly developing a nuclear weapons program through the use of these second-tier proliferation rings. This should help address the demand side of nuclear proliferation by making those proliferation activities unattractive because of the possibility of being completely cut off from all nuclear related materials.

The Libyan model also provides an example of the effectiveness of other international means, such as the use of multilateral economic sanctions, at preventing nuclear proliferation. The UN sanctions imposed upon Libya from 1992 to 1999 had devastating effects upon the Libyan economy and the Libyan people. Similar devastating economic effects have been shown through other examples of the use of multilateral sanctions such as Iraq and North Korea, but it should be noted that these devastating economic effects did not prevent North Korea from developing nuclear weapons. Since North Korea did not depend heavily upon international trade, the effects of multilateral sanctions were not sufficient to prevent nuclear proliferation activities. Therefore, multilateral economic sanctions can have a huge impact on the economy of the targeted state if that state's economy relies on international trade or international markets. The severity of the economic effects depends upon state specific criteria, namely that state's economic dependence upon international trade. Since the success of multilateral sanctions as a nonproliferation strategy is determined by the severity of the economic

effects and since those economic effects are determined by state specific criteria, the use of multilateral sanctions as a nonproliferation strategy should be applied on a case by case basis and not as an overarching policy prescription for all nuclear proliferation activities. In the Libyan model the lifting of the multilateral UN economic sanctions was a crucial causal factor for Libyan policy makers. As early as 1999, Libya offered to discuss abandoning its nuclear weapons program during discussions over the Lockerbie issue. Libya was so desperate to remove the burden of multilateral economic sanctions that it put everything on the table. It was the domestic pressures caused by the families of the Lockerbie incident that caused the U.S. insistence on resolving the Lockerbie issue first, and prevented the discussion of disarmament at that time. Although some would argue that this helped strengthen the U.S. bargaining position when the issue of WMD was addressed, it can also be argued that the weight of the UN sanctions was so great upon the Libyan economy that the 1999 offer of disarmament was real and should have been accepted. It took another four years of secret negotiations until an agreement was made on WMD disarmament.

Libya's nuclear weapons program purchased many nuclear materials and technology from the A.Q. Khan network during this period from 1999 until disarmament in 2003. Would these purchases still have been made if the U.S. and Libya agreed to disarmament when Libya offered it in 1999? Given Libya's track record with deception, it is hard to say if Libya would honor the agreement. However, the analysis in chapter four concerning Libya's efforts to normalize relations with the West points to several examples that Libyan officials were tired of sanctions and began to view the development of the nuclear weapons program as costly and detrimental to Libya's growth and security.

Therefore, through examples in the Libyan model, multilateral economic sanctions can be a powerful tool to discourage nuclear proliferation in the future.

On the other hand, the negative effects of multilateral economic sanctions are severe. There are at least two negative effects of multilateral sanctions including the effect upon the citizenry and the length of time it takes to illicit changes in state behavior. First, as the Libyan model demonstrates, it is the citizenry that are impacted the most by sanctions and not the leader. The leaders of the state being targeted by multilateral sanctions rarely feel the effects of those sanctions because they are sheltered in elite status. Unfortunately, the most visual effects of economic sanctions are poverty, deprivation, and death amongst the citizenry, who usually have little influence on state behavior.

The other negative effect is the slow results of economic sanctions in terms of influencing state behavior concerning nuclear proliferation. It often takes years for the effects of the sanctions to be felt by the targeted state, and sometimes targeted states find ways around the sanctions which delays the full effects of the sanctions even longer. In the Libyan model, the use of U.S. unilateral economic sanctions correctly identified a state specific criteria of Libya, namely the need for U.S. technology and expertise for its aging oil infrastructure. However, despite correctly identifying a state specific need which was a causal factor for Libya's policy reversal, these unilateral sanctions were in place for more than twenty years before Libya changed its state behavior. Indeed, the ability of Libya to find alternative European markets for their oil exports and materials undercut the effectiveness of unilateral sanctions. Only through multilateral economic sanctions with broad international consensus, can the effects upon the economy be

sufficient enough to alter the targeted state's behavior. However, according to the Libyan model, even if a state feels the full effect of multilateral sanctions, it still takes years before state behavior is changed. In the Libyan model, UN multilateral sanctions were imposed for seven years from 1992 to 1999 before Libya agreed to international demands. In terms of nuclear proliferation, seven years could be the difference between a state having no nuclear weapons and a state having an arsenal of nuclear weapons. Therefore, multilateral and unilateral economic sanctions are somewhat effective at preventing nuclear proliferation, but they take years to produce results and their success depends upon state specific criteria.

Although U.S. unilateral sanctions were in place for almost three decades and were not as influential as the multilateral sanctions, they were a causal factor in Libya's policy reversal. In particular, Libya's desire to lift the U.S. unilateral sanctions to revitalize their aging oil infrastructure points to the effectiveness of these particular sanctions. Before the UN multilateral sanctions were applied, Libya was able to find replacement spare parts for its oil infrastructure from European markets despite the US unilateral actions. This delayed the effects of US unilateral actions. When multilateral sanctions were applied, the replacement European markets for spare parts were cut off. Even after the multilateral sanctions were lifted in 1999, the Libyans still approached the US to lift the unilateral sanctions because they needed US expertise, technology, and funds to revitalize their oil industry. These US economic sanctions regarding Libya's oil industry correctly identified a state specific criteria of Libya, namely the dependence upon oil in the Libyan economy, and applied pressure upon that state specific criteria to influence state behavior. As is often the case concerning the effectiveness of sanctions,

the unilateral sanctions took a long time to influence Libyan behavior. Although, in the Libyan model, the U.S. unilateral sanctions were a causal factor in Libya's decision to abandon its nuclear weapons, the ability of the target state to find replacement markets and the length of time it takes before the target state changes its behavior makes it an unattractive choice for future nuclear nonproliferation policies.

Another causal factor influencing Libya's decision to abandon its nuclear weapons program was the use of military force. Although all out war and regime change were U.S. strategies employed in dealing with Iraq, the possibility of those strategies being applied to Libya worried Libyan policy makers. Indeed, Libya had already been the target of U.S. military might in the 1980's with the Gulf of Sidra incident and the bombing raids of 1986. After these military strikes, Qadhafi did change his behavior and no longer sought confrontation with the West on the international scene. Under Qadhafi's rule, Libya and U.S. relations, progressed from bad to almost non-existent, and after the attacks of September 11th, the U.S. began to place a higher importance upon nuclear proliferation and WMD. With U.S. and Libya relations already shaky, Libya did not want to further antagonize the U.S. over its pursuit of nuclear weapons for fear that it would be the next target of U.S. military action. The Libyan model suggests that military strikes and the perceived threat of violence can alter the security concerns of states pursuing nuclear weapons to the point where that state begins to see the pursuit of nuclear weapons as detrimental to its security. While the development of nuclear weapons is thought to enhance the security of the state pursuing them, that premise can change with the proper use of military force. The Libyan model shows how military force and the perceived threat of force can alter state behavior. As was demonstrated in chapter four,

the security concerns of Libya changed and this acted as a causal factor in Libya's decision to abandon its nuclear weapons program. For future policy decisions, the Libyan model demonstrates that military force or even the perceived possibility of military force can be an effective tool in preventing nuclear proliferation, but it should only be used as a last resort to prevent the possibility of conflict escalation and to prevent unnecessary death and destruction.

However, as is often the case with military interventions, international condemnation and humanitarian concerns are raised. While all out war and regime change are the quickest ways to change a state's behavior, the costs of these options are often high. Civilian casualties and the difficulties of state building tarnish international prestige and can often lead to long drawn out conflicts or even larger international conflicts. Despite the relative speed with which military force produces results in comparison to economic sanctions, the costs and potential escalation of this option make it only acceptable as a last resort option. In the future, hopefully the threat of force will be sufficient enough to curtail nuclear proliferation activities, but if a non-nuclear-weapons state is close to developing nuclear weapons and refuses to abide by international regulations then all out war and regime change should be considered as policy options.

Finally, the development of stronger counter-proliferation techniques through initiatives such as the PSI, were also effective at influencing Libya's decision to abandon its nuclear weapons program. The interdiction of the ship BBC China and the subsequent seizure of the centrifuge technology that it was transporting to Libya through the A.Q. Khan network gave Qadhafi a save face option. By catching Qadhafi red handed and

exposing Libya's clandestine nuclear weapons program, the PSI interdiction allowed Qadhafi to come clean during negotiations. Up until the interdiction of the BBC China, Qadhafi and no other Libyan official had admitted to the clandestine efforts to develop a nuclear weapons program. After the interdiction, those who took part in the secret negotiations noticed that the process began to speed up. With the cat out of the bag, Libya and the U.S. came to an agreement concerning disarmament just two months after the interdiction. Although negotiations were already ongoing and although there were other causal factors that influenced Libya's decision, the interdiction was undoubtedly a trigger that hastened the negotiations process. Since Libya got caught in its nuclear proliferation activities, it could then agree to disarmament and appear to be cooperating with international agencies. Libya's cooperation and policy reversal placed Libya in a positive international light and showed its willingness to conform to the nuclear nonproliferation regime. This was seen as a positive move for Qadhafi both domestically and internationally. He did not appear to be succumbing to U.S. demands, which gave him his save face option and hastened the negotiations process. Therefore, in the future stronger counter-proliferation techniques, such as those included in initiatives such as the PSI, will not only strengthen the nuclear nonproliferation regime's ability to prevent nuclear proliferation through searches and seizures of suspected illegal nuclear material transports but it will also allow for a save face option for the states with clandestine nuclear programs if they get caught.

The PSI also enjoys strong international consensus and backing. For initiatives such as this to be successful in the future it is necessary to have strong international support. Obviously, from a logistical standpoint, strong international support is necessary

to effectively conduct the appropriate searches and seizures of suspected transports. If only a few states were participating in the PSI, then there would not be enough manpower or resources to effectively patrol the areas of suspected nuclear proliferation activities. With many states participating in the PSI, resources and responsibilities can be distributed into manageable portions amongst the participating states. In the Libyan model, the successful interdiction of the BBC China brought to light the extensiveness of the A.Q. Khan network and the weaknesses that the existing nuclear nonproliferation regime had at preventing nuclear proliferation rings. Indeed, the PSI and the Additional Protocol were initiated to help prevent the success of these nuclear proliferation rings and clandestine nuclear weapons programs, and with good intelligence and strong international support these improvements to the nuclear nonproliferation regime will help prevent nuclear proliferation activities in the future.

The Libyan model shows that there were many causal factors initiated by international and U.S. actions that influenced Libya's decision to abandon its nuclear weapons program. Many different strategies were employed to influence Libyan state behavior. While some strategies were more effective than others, each had its own impact upon Libya. Since so many causal factors existed in the Libyan model, it might not be able to provide a broader international model for nuclear proliferation policy decisions as a whole. Instead, it is more likely that certain state specific criteria must be taken into consideration when determining future nonproliferation policies towards states suspected of nuclear proliferation activities. For example, Libya's dependence upon U.S. technology for its oil infrastructure made lifting the U.S. unilateral sanctions a causal factor in Libya's policy reversal. However, it is unlikely that future states of concern will

be as susceptible as Libya was to U.S. unilateral sanctions unless the U.S. can correctly identify a need of the target state that it cannot find a replacement market for, such as the need for U.S. technology and materials to revitalize the oil industry in the Libyan model. For future policy decisions regarding nuclear proliferation, the use of unilateral sanctions should be applied only when such a need is identified and only when the existing nuclear nonproliferation regime proves ineffective. The Libyan model shows that these unilateral sanctions take too long to achieve the desired result and that the target state often finds replacement markets which delay their effects. Although the use of unilateral sanctions can be an effective tool in altering a target state's behavior, as the Libyan model proves, it is unlikely that their use would be the best option for future policy decisions regarding nuclear proliferation.

Another state specific policy option deals with the use of military force. Libya's lack of conventional forces left it defenseless against U.S. military might and helped change the security concerns for Libya, especially after the attacks of September 11th and after Saddam Hussein's removal from power when the U.S. began to place a higher importance upon nuclear proliferation. When dealing with future states of concern, this flop sided military advantage might not exist. The military force option might not be available to help change the security concerns of future states of concern and subsequently alter their state behavior regarding nuclear proliferation. Although the military force option was effective at influencing Libya's policy reversal, the possibility of applying it to a broader international model is unlikely without the creation of some sort of international nuclear proliferation policing agency that had the power to use an international military coalition to enforce the tenets of the nuclear nonproliferation

regime. Therefore, for future policy decisions concerning nuclear proliferation, the use of military force should be applied on a state-by-state basis according to certain state specific criteria, namely the military strength of the target state, and should only be used as a last resort.

On the other hand, the use of multilateral sanctions and the improvements made upon the nuclear nonproliferation regime, including the Additional Protocol and the PSI, point towards the possibility of the formation of a broader set of international policies that can be derived from the Libyan model. The use of multilateral economic sanctions that enjoy strong international support can have devastating effects upon the target economy. In the Libya model, the UNSC lessened the full effect of the multilateral economic sanctions by not including a ban on Libya crude oil. If a more comprehensive multilateral economic sanctions package was applied to Libya which included Libyan crude oil, Libya may have altered its state behavior sooner. For future policy decisions regarding nuclear proliferation, strengthening the magnitude of these multilateral sanctions upon targeted states might help achieve the desired result quicker. However, despite the delayed results of multilateral economic sanctions, they can play a crucial role in affecting the economy of the targeted state to such a point that it eventually must give up its nuclear proliferation activities in order to alleviate the poverty and hardships that multilateral sanctions cause. Therefore, as the Libyan model proves, multilateral sanctions are an effective tool at curtailing nuclear proliferation activities and should be applied to a broader international model for dealing with nuclear proliferation activities.

Also, the improvements made upon the nuclear nonproliferation regime in the form of the Additional Protocol and the PSI, are proactive steps taken by the international

community to overcome the weaknesses in the prior nuclear nonproliferation regime. While the Additional Protocol does help alleviate some of the weaknesses in the nuclear nonproliferation regime concerning clandestine nuclear weapons programs, it only applies to those states that have ratified it. Although, it does increase IAEA inspections in the states that have ratified it and helps prevent those states from developing clandestine nuclear weapons programs, it does not apply to the states that did not ratify it. This prevents the Additional Protocol from being applied to a broader international model concerning nuclear proliferation activities because it only subjects certain states to its tenets. If the Additional Protocol were somehow altered to allow IAEA inspectors into any state suspected of developing a clandestine nuclear weapons program regardless of whether or not that state ratified it, then this altered Additional Protocol could be applied to a broader international model for dealing with nuclear proliferation. However, since its scope only applies to states that have ratified it, the Additional Protocol represents a positive step in strengthening the existing nuclear nonproliferation regime but it cannot be used in a broader international model for dealing with nuclear proliferation without the inclusion of a mechanism that applies its tenets to states that have not ratified it.

Finally, the PSI is an example of a proactive counter-proliferation initiative that needs wide ranging international support. This initiative cuts through treaties and international law to help make searches and seizures of suspected transports of illegal nuclear arms and nuclear materials more expeditious. Indeed, the PSI is responsible for almost a dozen successful interdictions concerning nuclear proliferation activities. This initiative promotes the sharing of intelligence amongst its members to strengthen the enforcement of the principles of the nuclear nonproliferation regime. The PSI and other

similar proactive counter-proliferation techniques greatly strengthen the existing nuclear nonproliferation regime and can be applied to a broader international model concerning nuclear proliferation activities.

Therefore, while the Libyan model provides examples of several actions that influenced Libya's policy reversal, future nuclear proliferation scenarios might require actions based upon state specific criteria, such as unilateral sanctions and military force, or a broader international model that includes multilateral sanctions and proactive counter-proliferation techniques. The ultimate goal is to have a strong enough nuclear nonproliferation regime that can prevent nuclear proliferation on the international level, so that unilateral actions and military force are not required. To do this, the nuclear nonproliferation regime must enhance its enforcement capabilities to control all nuclear materials and expand restrictions to all states, even those that have not signed and ratified the agreements of the nuclear nonproliferation regime. Only when a suspected state refuses the enforcement of the tenets of the nuclear nonproliferation regime would international support be given for military force. While this approach will greatly undermine the sovereignty of certain states, it is a necessary step towards the total prevention of nuclear proliferation. By using unilateral sanctions and military force options as a last resort for future nuclear proliferation policy considerations and by enhancing the scope and enforcement of the nuclear nonproliferation regime, future nuclear nonproliferation activities will enjoy greater legitimacy and international support. While these are merely suggestions for possible future policy considerations, the Libyan model clearly demonstrates that nuclear nonproliferation can be achieved through

peaceful means and that a stronger nuclear nonproliferation regime is needed to prevent future nuclear proliferation activities.

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